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Vento.

VENTO STEEL CASEMENTS

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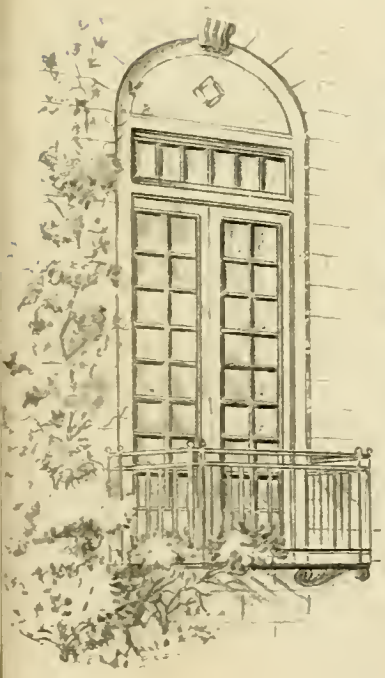
VENTO *Steel Casements*

. . . . add Charm and Dignity to every type of architecture from the largest structure to the modest home . . .



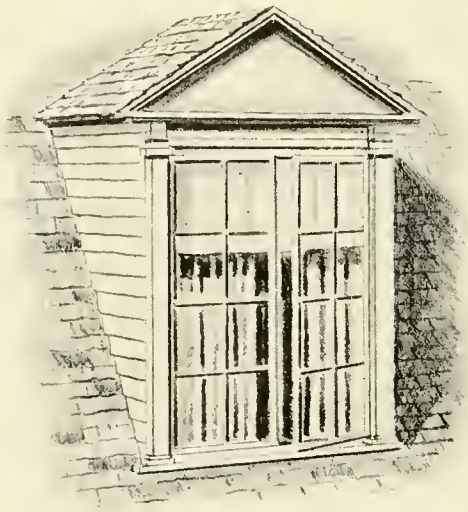
CATALOG CW-36

VENTO STEEL SASH COMPANY MUSKEGON MICHIGAN

WINDOWS of any type aside from architectural effect,

serve the practical means of controlling light and ventilation.

The construction of the modern steel casement not only provides more light per window area but the outswinging ventilators are adjustable to any angle, effectively controlling ventilation and inside temperature.



In appearance, the small sparkling panes of glass and the slender narrow lines provide a dignity and attractiveness not possessed by other window types; while their non-inflammability, weather-tightness, ease of cleaning, operating convenience, and immunity to shrinking, warping, or swelling; together with the low installed cost, makes the use of Steel Casements a matter of definite and practical good sense.

The Vento Residence Casement represents the highest development of the modern casement window. Architecturally correct designs, rugged materials, electrical welding throughout and painstaking inspection during manufacture and assembly insure their durability and positive weather-tightness. This line in all respects is worthy of the high standard of quality that is the hall mark of every Vento product.

Some Brief Facts About Casements

RANGE OF USE. While intimately associated with early English architecture and admirably suited to stone or half timbered design, yet the modern casement blends harmoniously with any type of residence architecture as well as commercial or institutional buildings of all classes.

CONSTRUCTION. Solid steel—hence non-inflammable and proof against swelling, warping, or sticking.

INSTALLATION. Casements are shipped complete with the frame and sash in one unit ready to install. All necessary erection fittings and hardware are supplied. Can be readily erected by any competent contractor. Wood interior trim is eliminated as sash weights and boxes, sash cord and pulleys, are unnecessary.

WEATHERTIGHTNESS. Vento casements receive unusual attention as to the fitting of ventilators. The wide double contact together with manufacturing care gives definite assured weatherproofness. When closed, the cam lock draws the ventilator absolutely tight all around the frame. This fitting is so tight and snug that a sliding wood window under similar close fit would be immovable. Weathering qualities of Vento casements are definitely superior to wood windows completely weatherstripped.

VENTILATION. An ordinary wood window gives a maximum of 50% ventilation. Vento casements are available with varying degrees of ventilating area up to 100% (see plate of standard sizes pages 12 and 13). The outswinging ventilators are adjustable to any angle, deflecting outside breezes into the building. The operating mechanism is arranged so as to provide crack ventilation for night use in cold weather. Thorough control of ventilation is assured.

LIGHT. The narrow frames and intermediate bars together with the absence of bulky casing gives considerably more light for the same opening or the same amount of light in a smaller opening.

DRAPERIES AND SHADES. All casements are shipped with holes drilled for shade or drapery brackets. Special hardware is available for use with Venetian Blinds.

SCREENING. For installations requiring screening, De Luxe casements are recommended. See detailed description page 8.

CLEANING. Extended hinges permit easy cleaning entirely from the inside of the building without leaning out. See illustration.

COST. The initial cost is surprisingly low—comparable to ordinary wood windows, all factors of installation considered. There are no "extras" to buy and no trim or weatherstripping required. Maintenance cost consists of painting in the same way that other parts of the building are cared for in this respect.

UNDERWRITER CASEMENTS. Where fire hazards or local regulations require, this window can be furnished in Underwriters labelled type.

We recommend the use of wood Surrounds for the exterior casing. *See details on pages 20 and 21*

A Large Stock of Casements and Surrounds maintained for prompt shipment

VENTO CASEMENTS BRING BEAUTY AND CHARM WITHIN THE HOME

While the outward appearance of the average residence is important and it is undeniable that the modern steel casement will give character, dignity, and beauty to any style of architecture, yet it is really the comfort, weather-tightness, convenience, and charm which steel casements add to the interior of the home which is responsible for their wide popularity.

Being completely weather-tight, winter comfort is positively assured, while in summer when adequate ventilation is important the outswinging casements, instantly set at any angle, catch every breeze deflecting needed air to the heated interior.

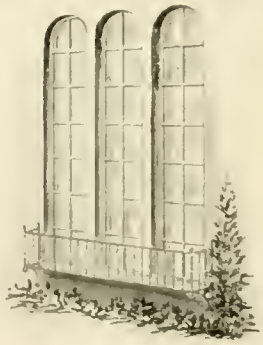
VENTO STEEL CASEMENTS ENHANCE THE BEAUTY

Any type of construction can be made more attractive and will more effectively control light and ventilation by the proper grouping and arrangement of window types and muntin design.

Vento casements blend harmoniously with every architectural treatment. These illustrations represent installations in all types of construction and in every part of the country.

Oriels or "Bays" can often be used to effectively increase interior space, provide more light and air, and to add an interesting architectural effect.

High narrow windows with or without circular transoms add to the dignity and impressiveness of certain types of construction.



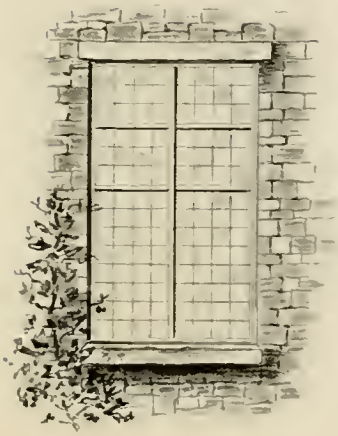
Names and addresses of any installations illustrated will be gladly supplied on request.

OF EVERY TYPE OF ARCHITECTURE

Window continuity around corners is in the most advanced modern style

The Gothic Head Treatment illustrated in the church above can frequently be employed to advantage in this type of architecture.

Other illustrations on this page show the complete adaptability of Vento Casements to construction varying from frame to monumental masonry.

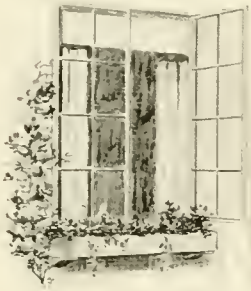


Complete omission of the intermediate bars (muntins) allows interesting and variable leaded glass effects.

Combination of muntin arrangements are almost endless giving great flexibility in window and architectural treatment.

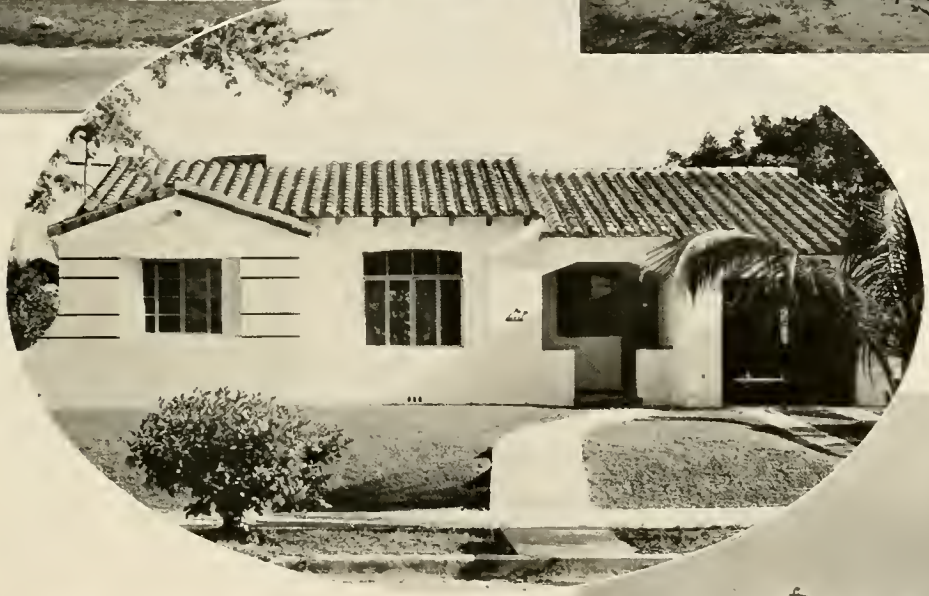
STUCCO CONSTRUCTION

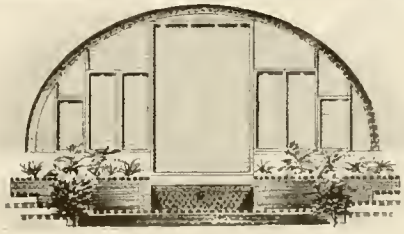
These photographs illustrate the adaptability of steel casements to varying styles of stucco construction



SPANISH AND MODERNE

Vento casements adapt themselves to climatic conditions varying from that of tropical America to the High Rockies





Vento Casements are of Two General Types, "De Luxe" and "Simplex"

Both types are with outswinging ventilators and designed for outside putty glazing. Both are equipped with extended cleaning hinges. Dimensions, construction details, and workmanship are identical in either type. The difference is in the method of operation, the screening details and the kind of hardware and hinges.

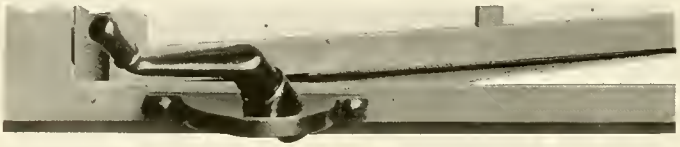
"De Luxe" locking handle No. 333

"DE LUXE" CASEMENTS

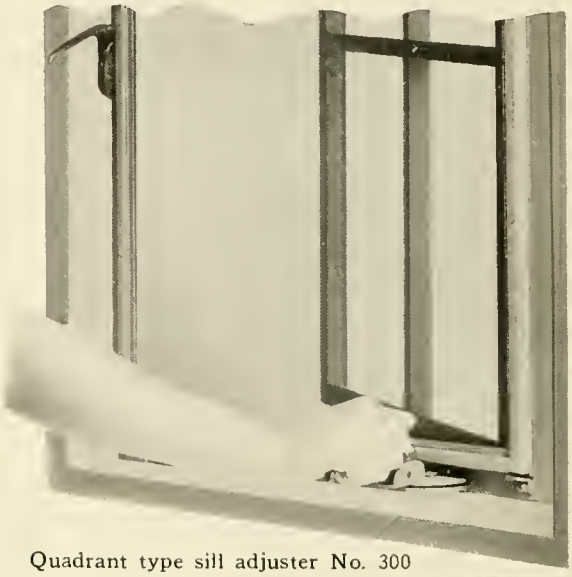
are designed particularly for the screened requirements of residence installations. This is truly the modern casement window and is recommended for all construction where screening is required.

This type of casement is equipped with underscreen hardware which operates the window through the sill of the casement frame, permitting the entire ventilator opening to be screened with flat screens attached to the inside of the casement.

The screen is not removed for any stage of window operation.



Rotary adjuster No. 307 optionally supplied for "De Luxe" Casements



Quadrant type sill adjuster No. 300

The screen is firmly held against the face of the casement by wedge action brackets at the bottom and strong spring clamps at the sides. Screens are easily removed as shown.

The screen is just as easily replaced by dropping the frame into the two sill brackets and snapping the frame into place at the top.

Detail of quadrant type sill adjuster No. 300

All hardware is in natural bronze finish. Rust-proof cadmium plate is liberally used on all steel parts while the locking handle and handles of underscreen operators, patterned to match, are graceful masterpieces of hardware craftsmanship.

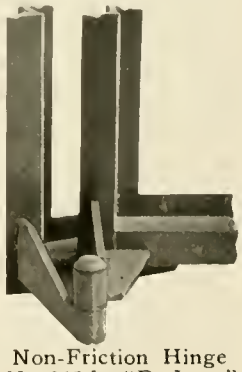
All sill adjusters are arranged to give a "crack" opening for winter ventilation. Non-friction hinges are standard with "De Luxe" Casements.

Where Venetian Blinds are to be used, locking handles and adjuster handles of a special flat type are available permitting the shade to lie flat against the Casement and cover the entire opening.

All Casements are drilled for shade brackets.

The complete simplicity and effectiveness of screening Vento Type Casements is a revelation in screening. The screen itself is unobtrusive and is instantly attached or removed without the use of any tools whatever and without disturbing draperies.

CASEMENT HINGES support the entire weight of the ventilator section as well as being of necessity strong enough to resist wind stresses. The hinges for both "De Luxe" and "Simplex" Casements are of extra heavy double webbed construction and cadmium plated, giving the utmost in both lateral and vertical strength as well as in resistance to weather corrosion. Both webs of the hinges are solidly welded into the frame of the casement insuring against sagging of the ventilator and providing positive locking and weathertightness under all conditions. The hinge is designed with ample clearance between the webs to prevent seizure due to ice or snow. All standard hinges are of the extension type for easy cleaning. See illustration page 2. Close-up hinges in either the friction or non-friction type can be supplied when required.



Non-Friction Hinge No. 345 for "De Luxe" Casements

VENTO "SIMPLEX" CASEMENTS

This type of casement is of the same general construction as the "De Luxe" type illustrated on the opposite page. The operation, hardware and screening details differ, however, as described below.

The locking handle operates through the casement frame permitting a flat type of screen to be used. This type of window, however, is not equipped with sill adjusters or opening devices and the ventilator leaf must be opened and closed by hand, for which purpose the pull ring is attached. The vent is held in any open position by adjustable friction built into the hinges. Operation of this type of window is illustrated at the left.

Being without sill adjusters, the screen must be of a type permitting same to be opened to operate the window. Side hinged screens as illustrated are recommended. Roll-Screens (See Page 10) can also be used. The window and screen in closed and locked position is illustrated at the right. This shows the detail of the side hinging of the screens.

The screen snaps into place through a spring bolt operating in a recess in the locking handle case. Raising the locking handle and swinging the screen open as illustrated, permits the casement to be opened to any position where it is firmly held by strong friction hinges eliminating the necessity of any sill adjuster. The No. 129 pull ring as shown attached to the ventilator allows the window to be easily closed.

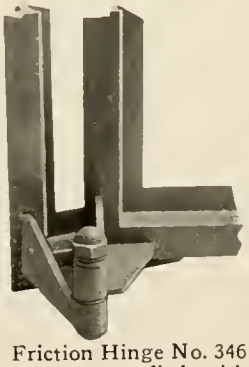
The ring drops down flat against the window and is not in the way of the screen closing. The screen is instantly removable as illustrated below.

Simplex Locking Handle No. 334

No. 118

No. 120

Simplex Casements can be supplied if desired with either locking handle 118 or 120 which are attached to the ventilator leaf instead of operating through the casement frame. No. 70 sliding stay sill adjuster as shown below can also be supplied when required. This hardware, however, cannot be used with flat side hinged screens and requires the use of screens of the rolling or vertical sliding type in order to clear the projection of hardware.



Friction Hinge No. 346 regularly supplied with Simplex Casements.

Non-Friction Hinge No. 345 is supplied when this sill adjuster is used.

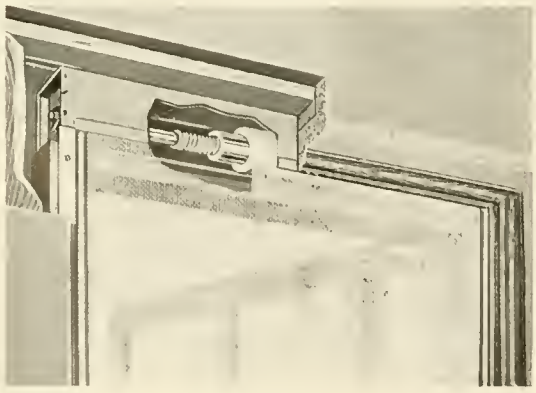
For Casements of "De Luxe," "Simplex" or "Economy" Type

Screens of the roll type are available when required. The operation is similar to that of the ordinary window shade, the screen rolling up on a spring roller contained in the casing at the head of the window, the screen being held flat against the window by side guides.

Illustration at the left shows the flat guide type of Roll-Screen applied to "De Luxe" Casement. The screen frame does not project more than the regular flat type of screen.

The application of flat guide Roll-Screens to Casements of the Simplex or Economy type is illustrated at the right. Whereas flat screens for this type of window require swinging the screen to open the window (See Page 9) the Roll-Screen is merely raised sufficiently to open or close the window, the screen then being lowered back to its locked position at the sill. This type of screen can therefore be used effectively to eliminate interference with Draperies or Venetian Blinds.

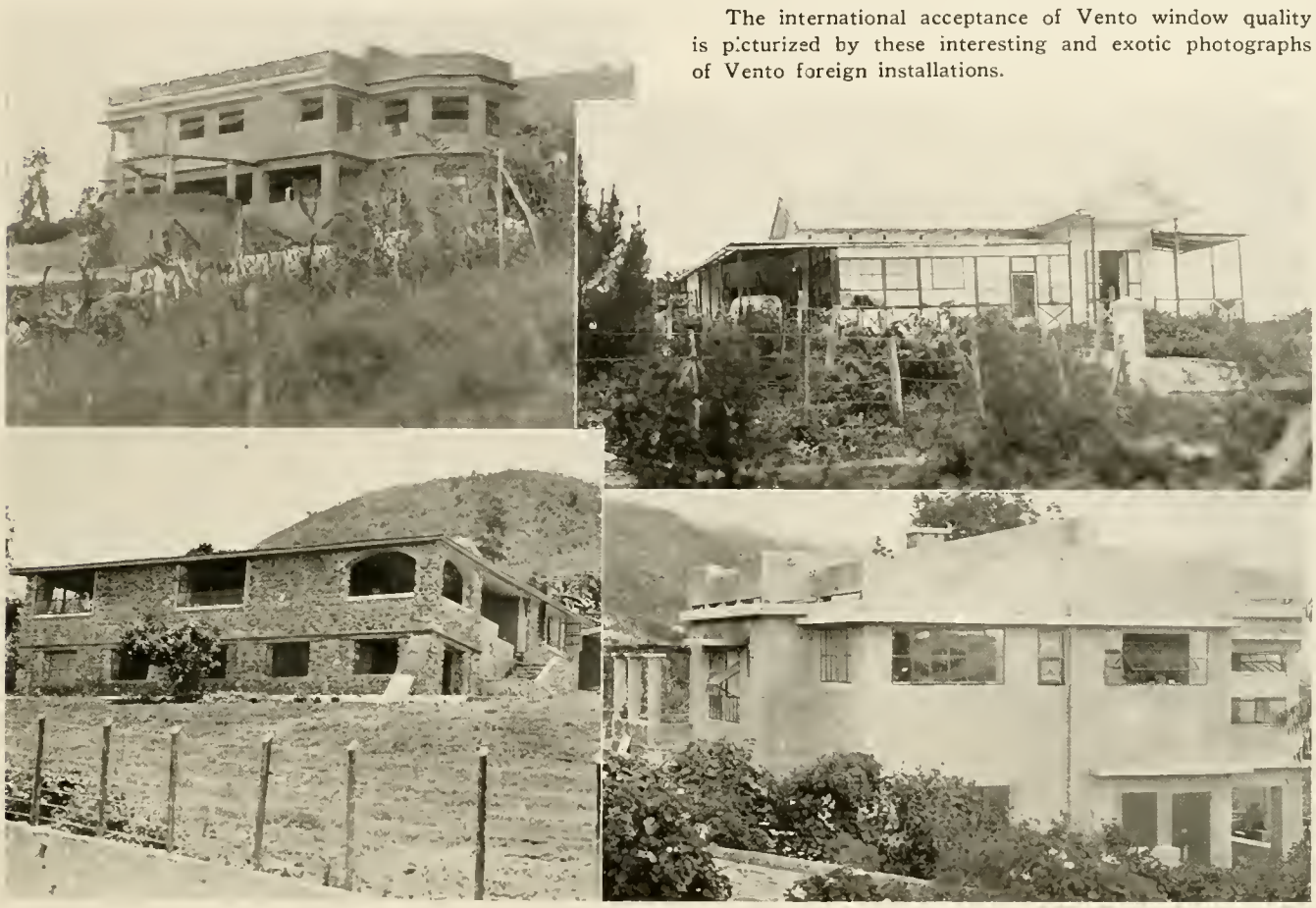
The flat guide type of Roll-Screen as above illustrated can be applied to old or new casement installations. Where desired the built-in type can be supplied as shown in the cutaway illustration. Such installations must be carefully designed with regard to all surrounding constructional details. On receipt of drawings showing such details, our Engineering Department will gladly submit special suggestions to suit the individual installation.



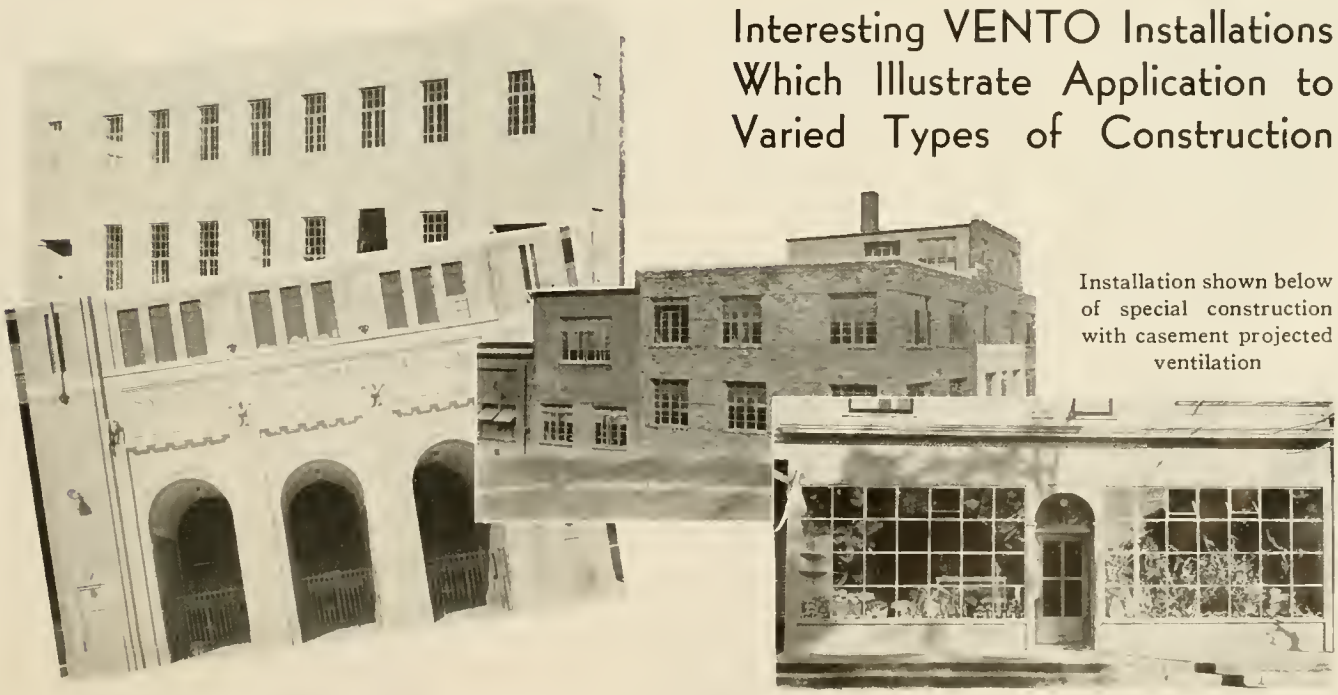
Aluminum screen cloth is furnished as standard with Roli Screens. Our experience definitely indicates the greater durability of aluminum material for Roll Screen use. Other screen cloth materials supplied on special order.

Casement installations intending to use Insulpanes (See Pages 22 and 23) should specify regular flat frame fixed screens (See Page 8) as screens must be removed to allow Insulpanes to be installed.

The international acceptance of Vento window quality is picturized by these interesting and exotic photographs of Vento foreign installations.

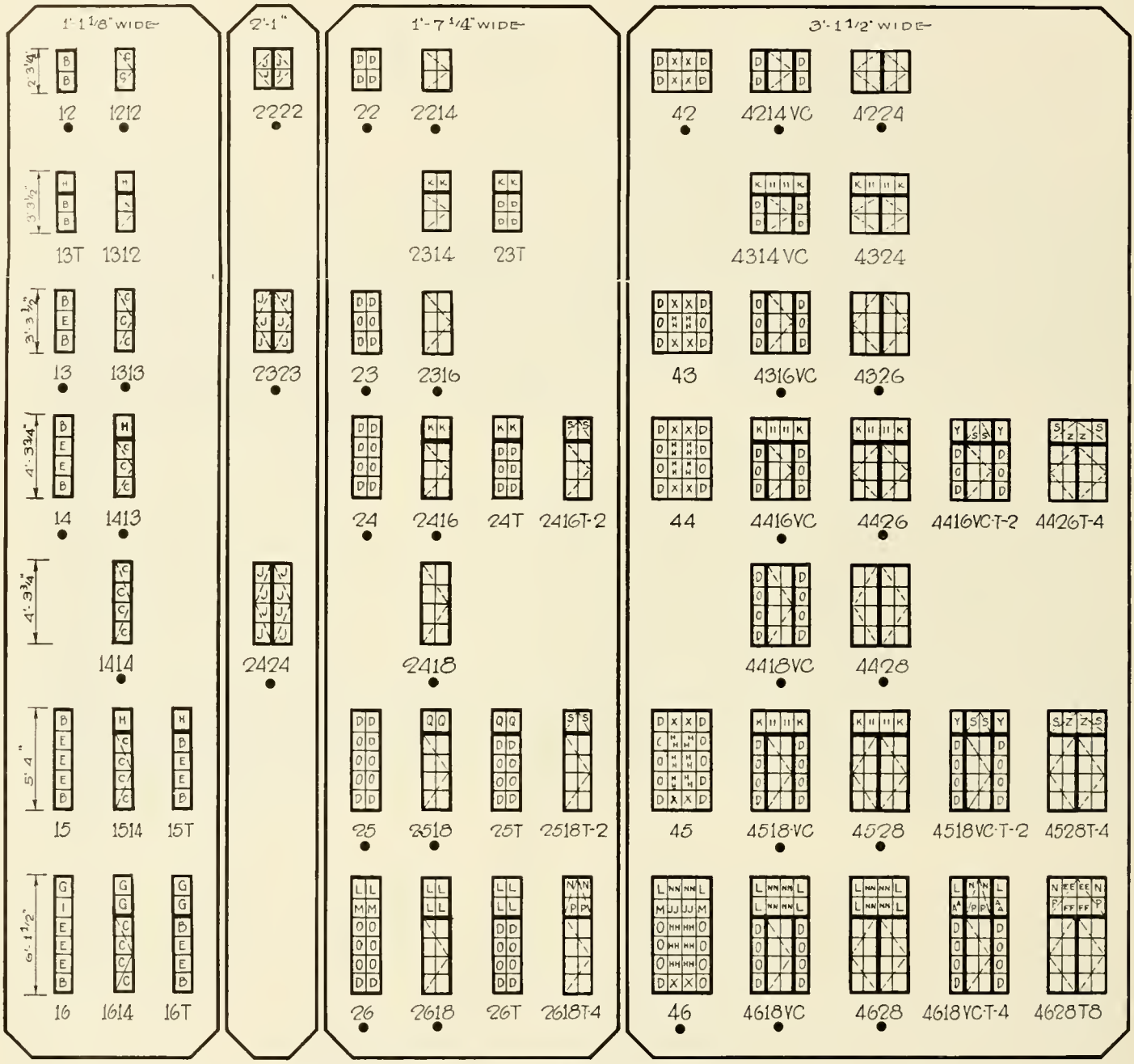


Interesting VENTO Installations Which Illustrate Application to Varied Types of Construction



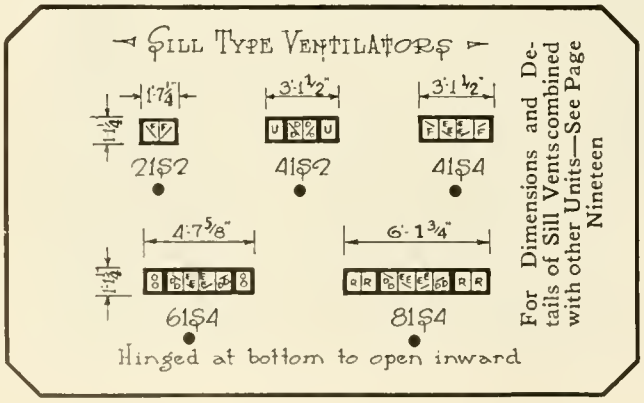
Installation shown below of special construction with casement projected ventilation

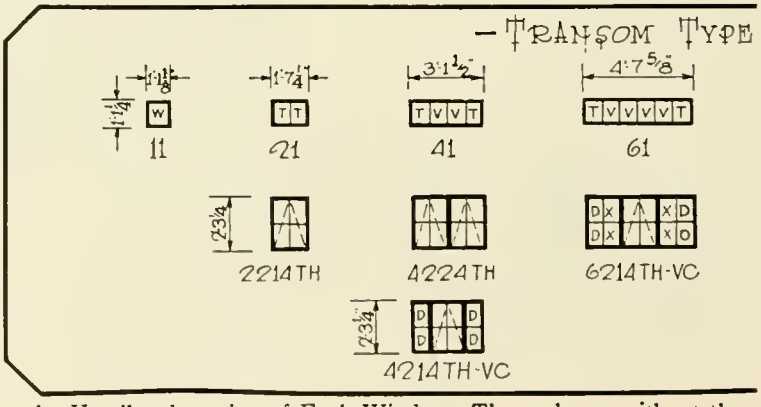
STANDARD TYPES AND SIZES



1st FIGURE = NUMBER OF LIGHTS WIDE 3rd FIG. = NUMBER OF VENTS
2nd FIGURE = NUMBER OF LIGHTS HIGH 4th FIG. = LIGHTS EACH VENT.

TRANSOM AND SILL TYPES





The diagonal dotted lines in the drawings above represent the Ventilated portion of Each Window. Those shown without these

STANDARD TYPES AND SIZES

4'-7 5/8" WIDE

62

6224

6224 VC ●

6324

6324VC

63

6326

6326VC ●

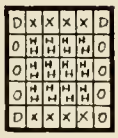
64

6426

6426VC ●

6428

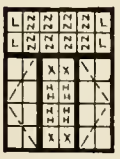
6428VC ●

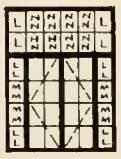

65

6528

6528VC ●

66


6628


6628 VC ●

6'-1 3/4" WIDE

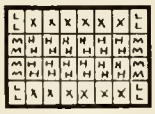
82

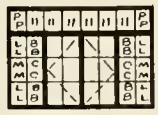
8224VC ●

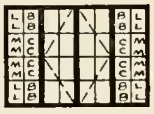
8324VC

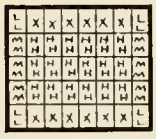
83

8326VC ●


84


8426VC ●


8428VC ●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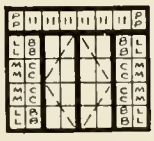
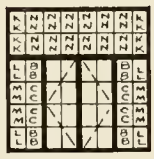

8528VC ●

86


8628 VC ●

GLASS SIZES

PANE	SIZE	PANE	SIZE
A	8" × 12"	V	8 13/16" × 11 9/16"
B	11 7/16" × 12 5/8"	W	11 7/16" × 11 9/16"
C	10 3/16" × 12"	X	8 13/16" × 12 5/8"
D	8 5/8" × 12 5/8"	Y	8 5/8" × 11 3/4"
E	11 7/16" × 12"	Z	8 13/16" × 10 5/16"
F	7 5/8" × 9 15/16"	AA	8 5/8" × 10 7/16"
G	11 7/16" × 10 9/16"	BB	8 3/4" × 12 5/8"
H	11 7/16" × 11 7/8"	CC	8 3/4" × 12"
I	11 7/16" × 11 1/4"	DD	8 3/8" × 9 15/16"
J	10 1/16" × 12"	EE	8 13/16" × 9 15/16"
K	8 5/8" × 11 7/8"	FF	8 13/16" × 9 9/16"
L	8 5/8" × 10 9/16"	GG	8 9/16" × 11 1/4"
M	8 5/8" × 11 1/4"	HH	8 13/16" × 12"
N	8" × 9 15/16"	II	8 13/16" × 11 7/8"
O	8 5/8" × 12"	JJ	8 13/16" × 11 1/4"
P	8" × 9 9/16"	KK	8 9/16" × 10 9/16"
Q	8 5/8" × 11 7/8"	LL	8 9/16" × 12 5/8"
R	8 9/16" × 11 9/16"	MM	8 9/16" × 12"
S	8" × 10 5/16"	NN	8 13/16" × 10 9/16"
T	8 5/8" × 11 9/16"	OO	8 3/8" × 11 9/16"
U	8 7/16" × 11 9/16"	PP	8 9/16" × 11 7/8"

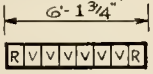
Templates required for circular head types.
Lights not lettered are size "A".

NOTES

Sizes given are exact sash sizes. 1/8" must be allowed on all sides for sash clearance. If more than one type is used in the same opening add 1/4" to the sum of the sash sizes for each mullion or transom used to determine the overall sash size.
For example: type 4426 is 3'-1 1/2" wide. Two types 4426 side by side in the same opening would be 6'-3 1/4".
Handing of casements is determined by location of hinges. Viewed from outside, right hand casement is hinged at right, left hand hinged at left.
VC = Ventilator in center
S = Bottom hinged sill type
● = Stock types T = Transom
Side hinged vents are outward opening. All types furnished without muntins when required.

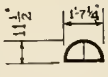
CASEMENTS WITH SINGLE SIDE HINGED VENTILATORS MAY BE RIGHT OR LEFT HAND AS DESIRED. i.e. TYPE 2416R OR 2416L

WINDOWS —

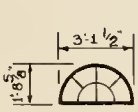


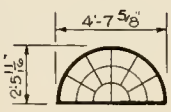
81

CH-1 ●


CH-2 ●

For Door Transom Sizes and Types See Page Twenty-six


CH4 ●


CH-6 ●

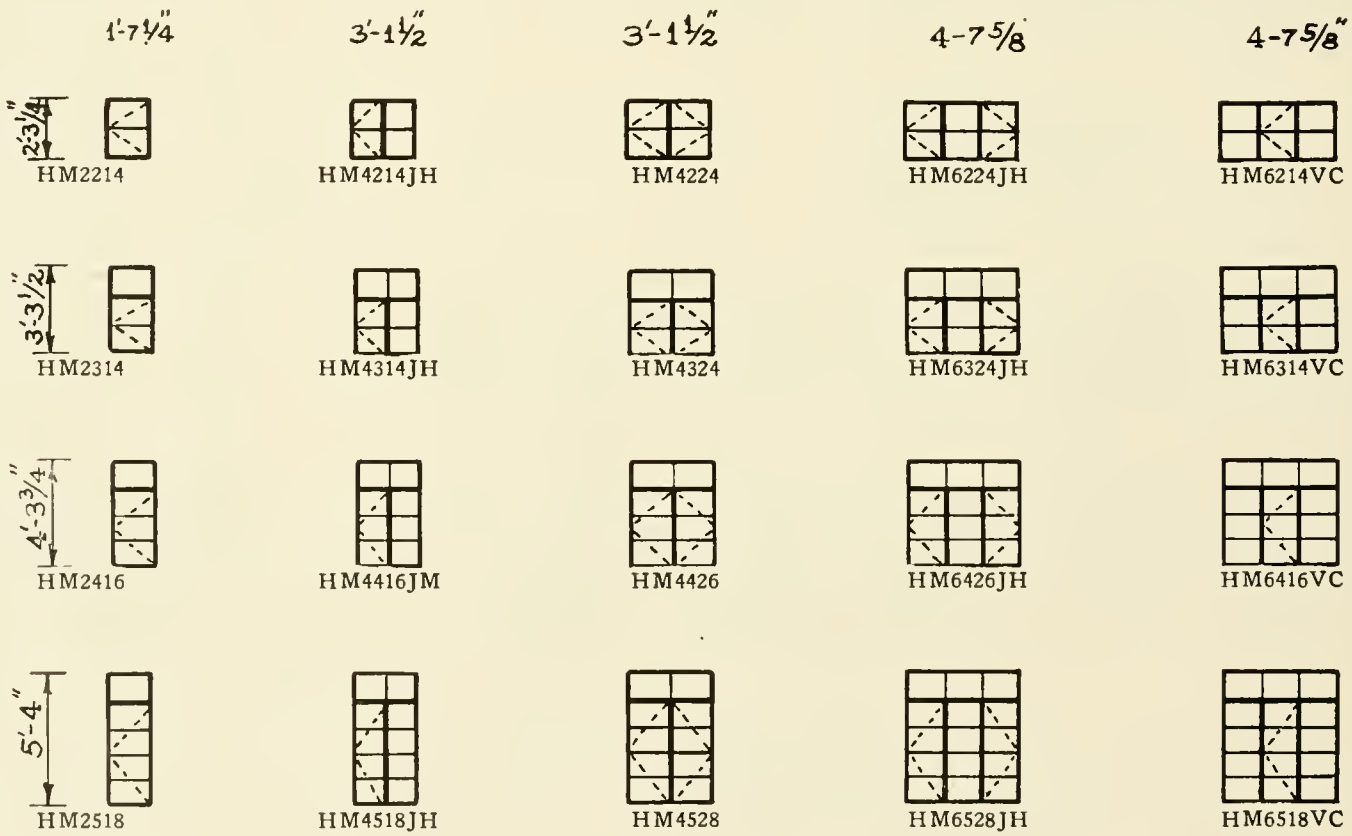
lines are "Fixed"—i. e. without Ventilators. The point at which these lines meet is the side on which the Ventilators are hinged

"Simplex" Type with Intermediate Vertical Muntins Omitted For Construction Requiring Maximum Window Economy

The following additional group of special units are presented to meet the increasing demand for a residence type of casement for use on construction where economy and first cost are of prime consideration.

This specially designed group is made of our standard residence casement section and with exactly the same constructional details except that the intermediate vertical muntin bars are omitted, which not only corresponds to the present trend of architectu al window design, but in addition, results in marked saving in glazing costs, which together with the very low price of the window units themselves, brings maximum economy in steel casement installation.

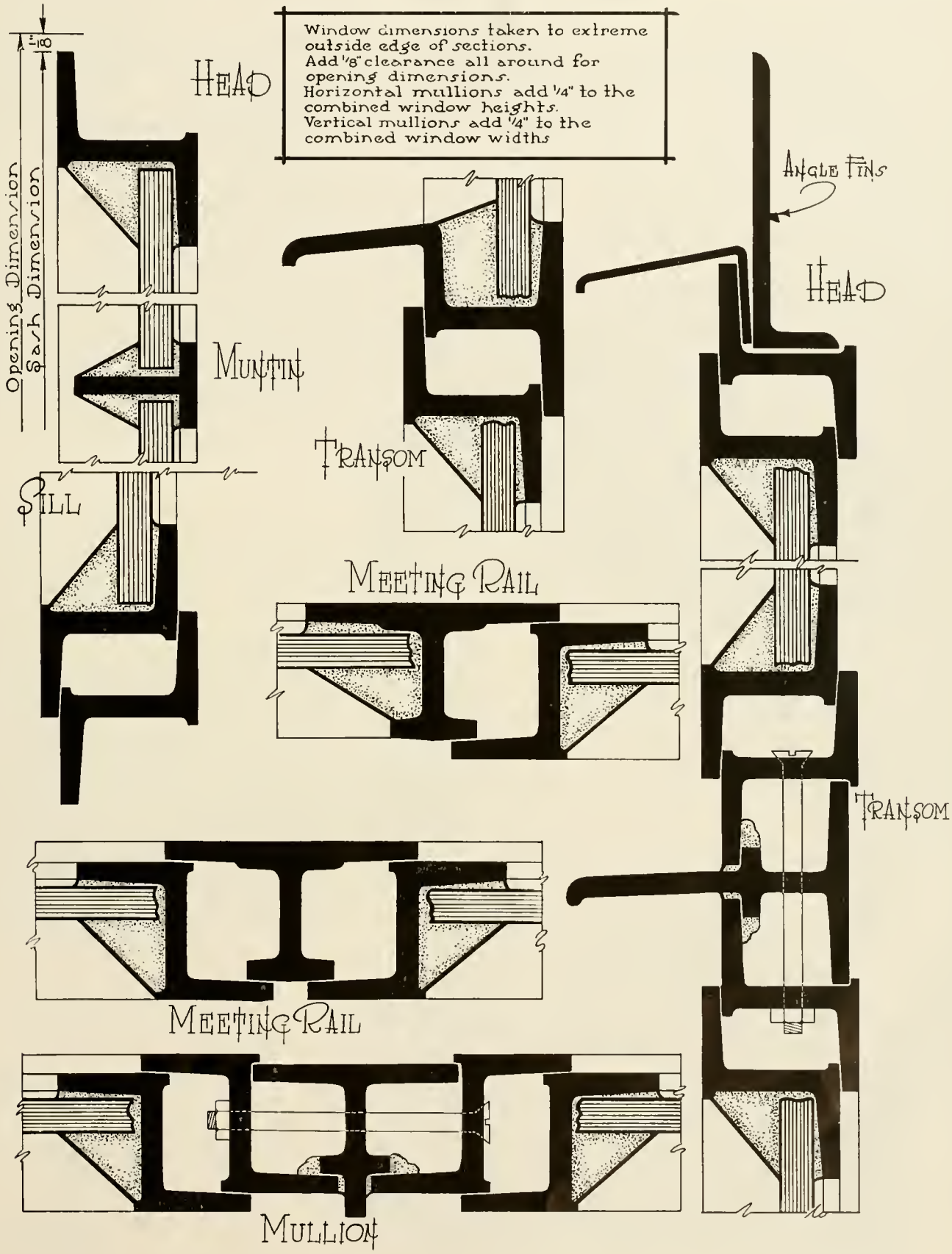
The hardware, operation and screening details of Economy Casements are the same as for the Simplex Type of window illustrated on page 9.



The types illustrated above have been carefully selected as representing average requirements and while the variation in sizes permits such treatment and arrangement as is ordinarily required, particularly for small home construction, yet the limits placed on the variation in types as illustrated above allows volume production and consequent economy in manufacture.

Where additional types or sizes of the design illustrated herewith are required, or special sizes, special muntin arrangements, or any other special features, same must be selected from types and sizes otherwise cataloged herein.

FULL SIZE DETAILS



OMISSION OF MUNTINS

Various architectural effects are readily achieved by the partial or entire omission of either the horizontal or vertical intermediate sash bars (muntins). Such arrangements are without extra cost if specified at the time of ordering

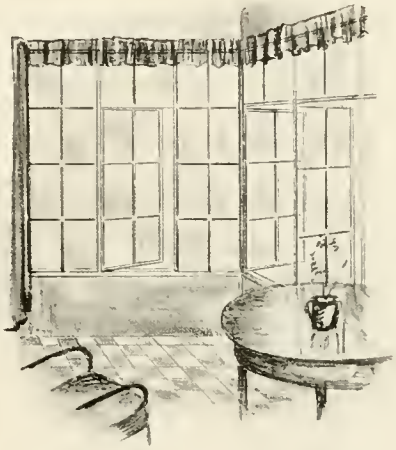
Artistry and dignity result from the use of leaded glass, either plain or colored. Muntin bars are entirely omitted for such construction. Muntin omission should, of course, be specified.

The entire omission of the muntin bars in the installation below results in an emphasis of the vertical line effect.

Either "Moderne" or Spanish architecture requires an elaboration of the horizontal line effect which is secured by the omission of the vertical muntins.

Vento steel casements are ideally suited to these varying construction details. Muntin omission does not weaken the window in any way. There is no extra charge for this service.

CORNER MULLION CONSTRUCTION



In many modernistic architectural casement layouts, the windows are continuous to the corners of the building.

This arrangement not only adds materially to the appearance of the modern structure, but facilitates cross-ventilation and greatly increases the amount of light admitted into the building. This window design also greatly facilitates arrangement of furniture.

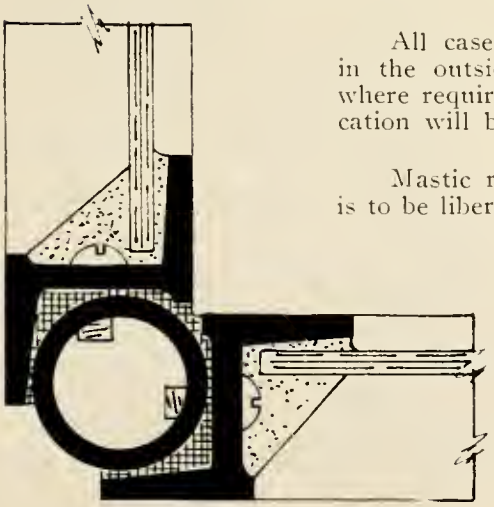
The use of one-inch pipe for corner mullions under such conditions makes a weather-tight and very neat assembly, and is our recommended detail in such instances. This type of mullion is furnished optionally when specified. Full structural details furnished on request.

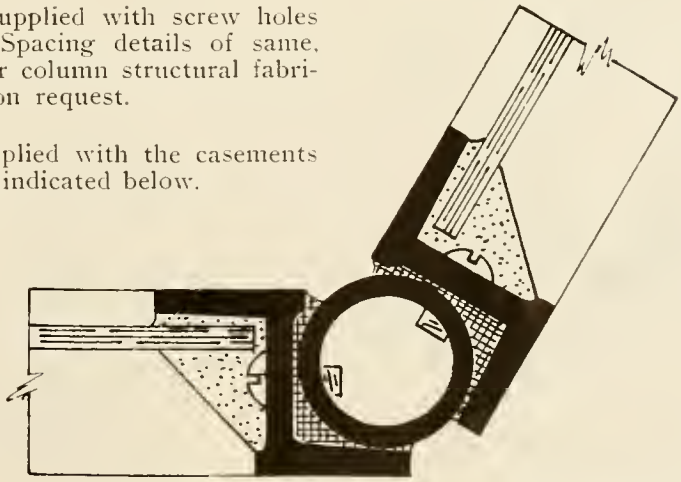
When conditions prevent cantilever framing and corner window mullions must be used for structural support, the above detail can be used but with such larger size pipe as is required by the loads in question. Such larger pipe mullions are not considered to be in the window contract and are to be supplied by others.

The use of pipe larger than two inches is not recommended due to the difficulty of tapping the screw holes at the acute angle necessary. In larger structures where loads require columnar strength greater than that for two-inch pipe, the use of regular structural members is suggested. Pipe mullions larger than one-inch are not usually included in window contracts and are to be supplied by others except under special arrangements.

All casements are supplied with screw holes in the outside frames. Spacing details of same, where required for corner column structural fabrication will be supplied on request.

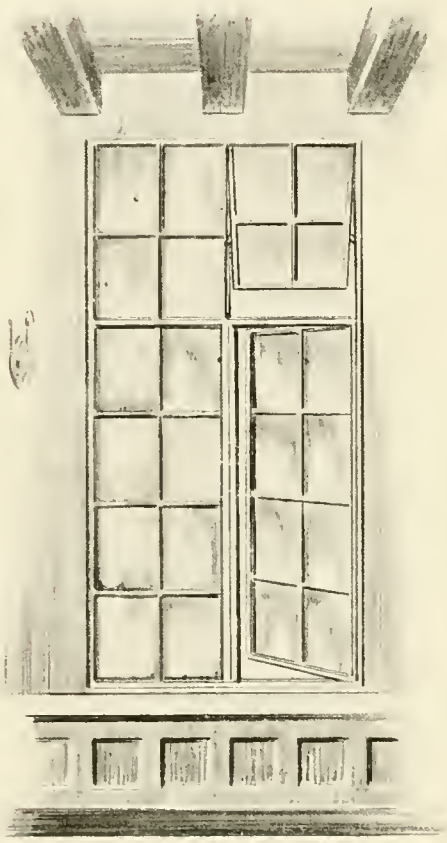
Mastic regularly supplied with the casements is to be liberally used as indicated below.





Standard sill and transom units are readily combined with other casements where additional light or ventilation is required

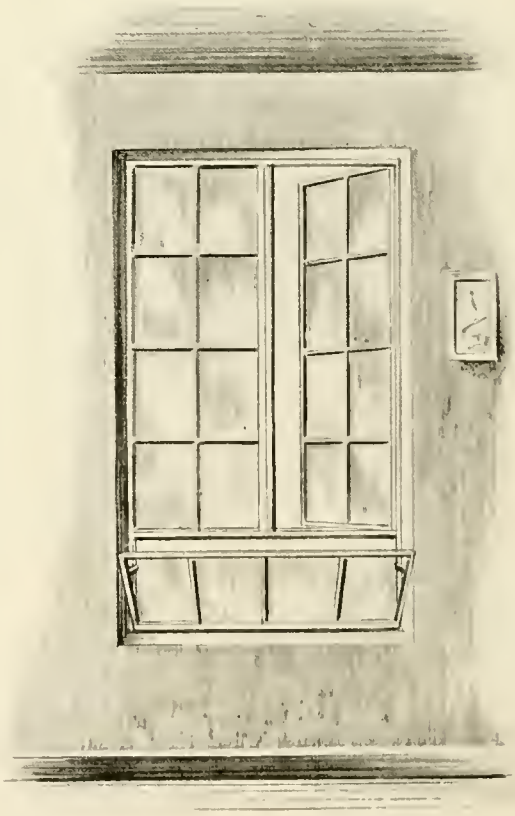
Standard sizes illustrated on pages 12 and 13
Door transoms shown on page 26



In buildings where greater height adds dignity and a more stately atmosphere, the height of the windows can be increased by adding transom units to the regular casement. Transom and casement units are designed to combine harmoniously into a window of attractive design.

Standard transoms one light high do not ventilate. Two-light high transoms are ventilated in that portion indicated by the diagonal lines, being hinged at the top, opening out at the bottom. (See transom units pages 12 and 13.

Transoms are combined with the other casements by horizontal mullion bars as shown in detail on page 19. This mullion adds one-quarter inch to the combined heights of casement and transom.

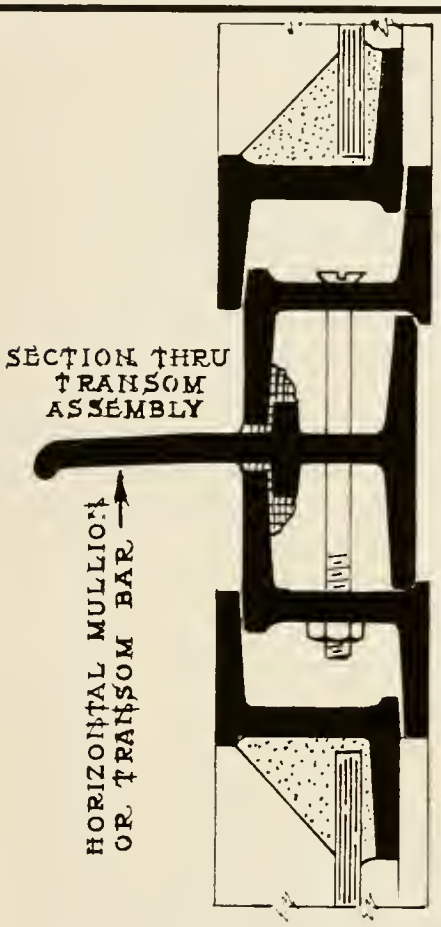


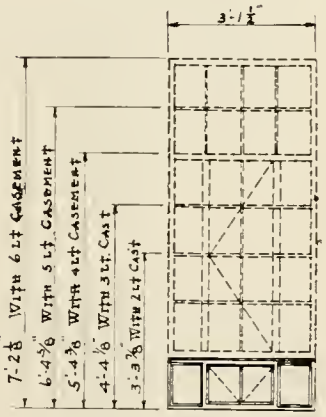
Tilt-in sill units are ventilated in that portion shown by the diagonal lines, being bottom hinged, opening in from the top. (See pages 12 and 13 for sizes and types).

Sill units do not require a horizontal mullion bar for attachment to the main casement unit, being directly bolted together, as shown by details on opposite page. Full construction details will be furnished on application. These sill types add twelve and five-eighths inches to the height of the casement with which they are used.

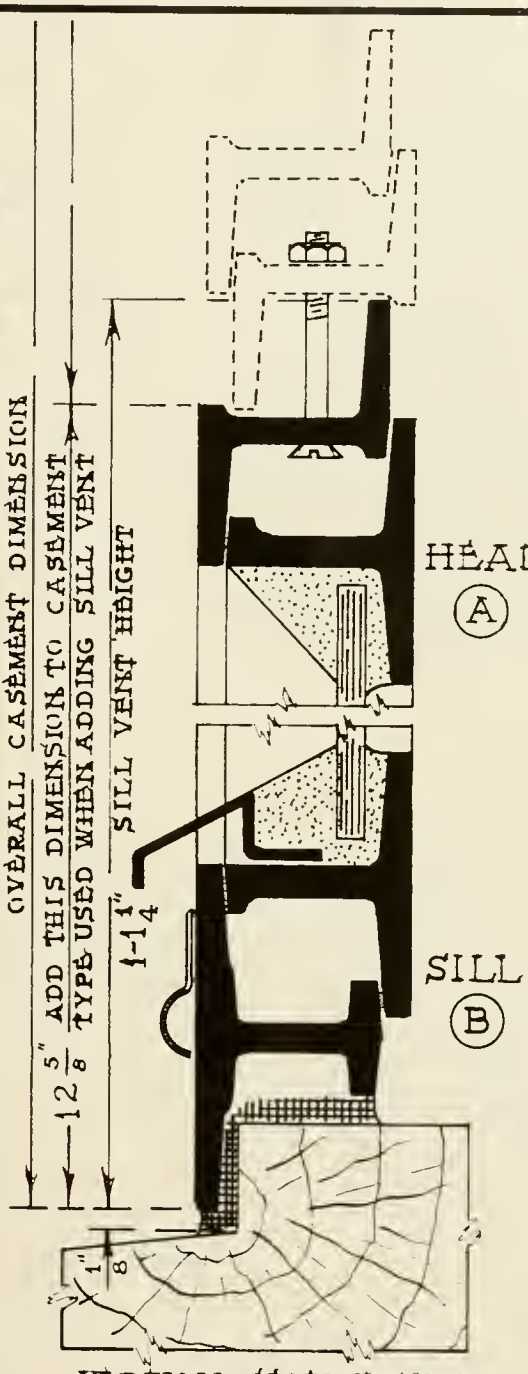
One-eighth inch clearance on all sides should be added to any such combined dimension to secure "opening dimensions."

SILL AND TRANSOM ASSEMBLY DETAILS

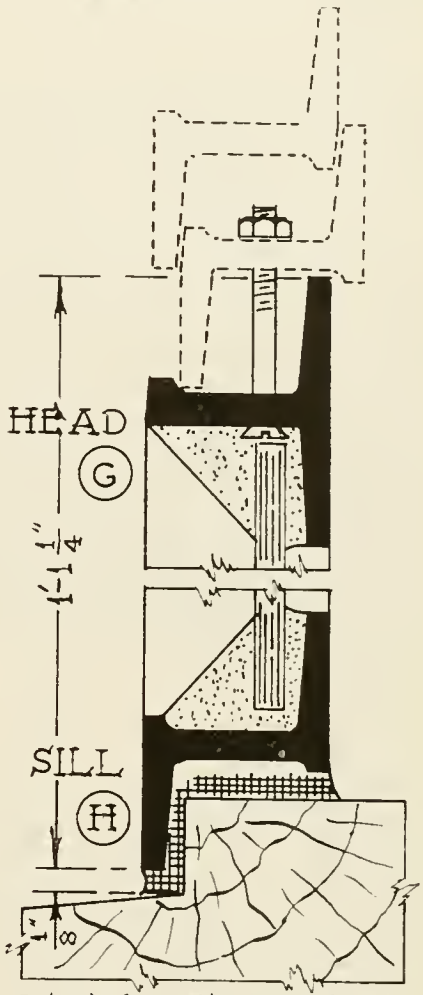




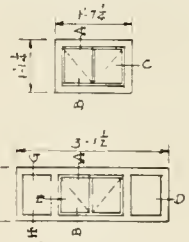
• OVERALL CASEMENT DIMENSION FOR STANDARD SILL VENT UNITS COMBINED WITH OTHER UNITS OF VARYING LIGHTS HIGH. •
• ADD 1/8" ALL AROUND FOR OPENING DIMENSION. •



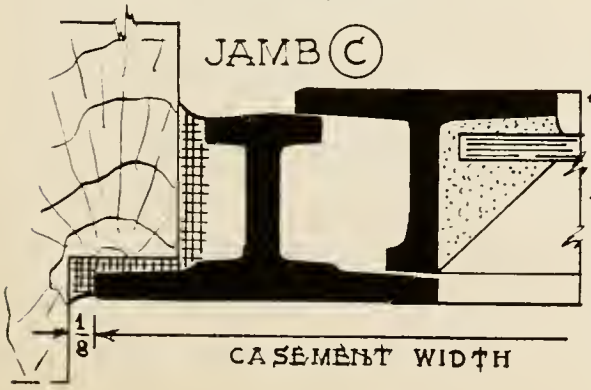
VERTICAL SECTION THRU VENTILATED SILL UNIT

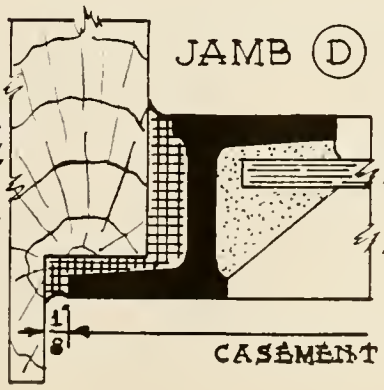


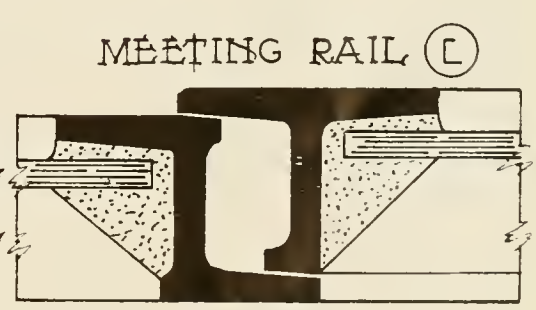
VERTICAL SECTION THRU FIXED SILL UNIT



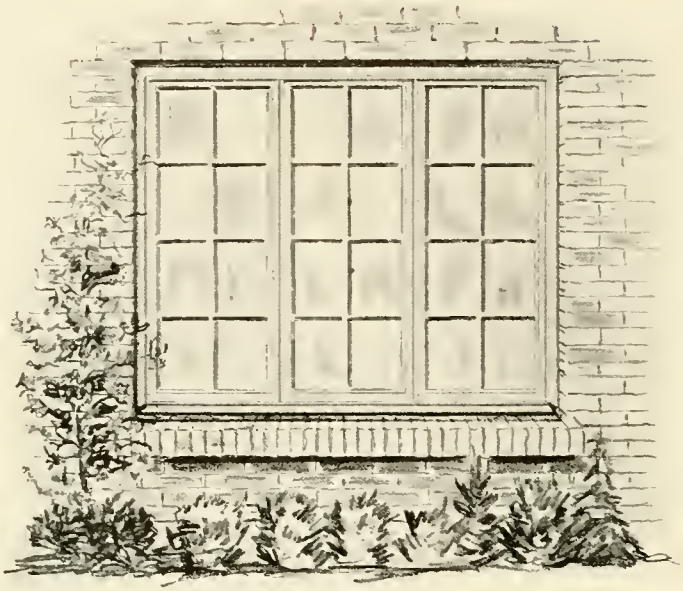
Above units shown to indicate section points. See pages 12 and 13 for full range of sizes.







REDWOOD SURROUNDS



Wood surrounds of California Clearheart Redwood, kiln dried, are made for all our standard size casements and are shipped complete with screws for attaching at time of erection.

The use of surrounds saves time and material, and being made of Redwood will last indefinitely without deterioration.

Vento Redwood surrounds have unusual resistance to weather and provide a brick guide for the mason which enables the brick to be layed up accurately and quickly.

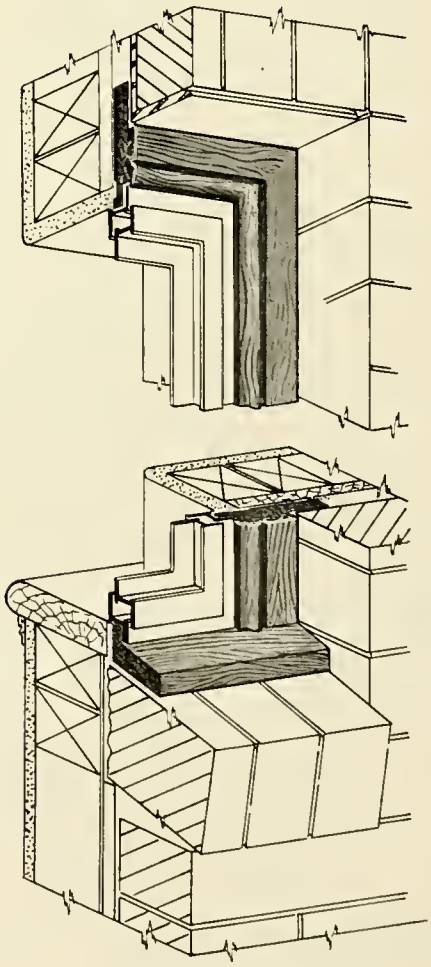
The use of Redwood surrounds provides a wider line between the brick and the casement which is sometimes desirable to achieve the effect of added weight or width.

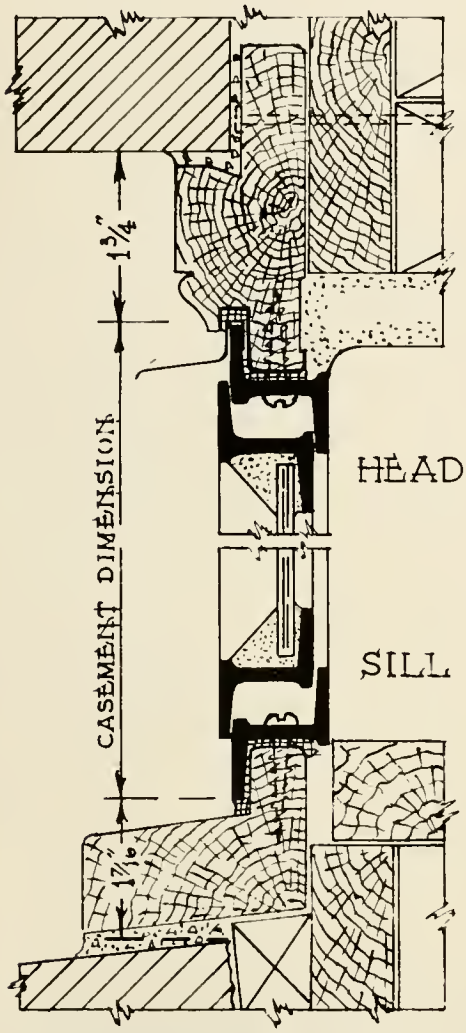
Redwood Surrounds not only provide a natural framing enhancing the beauty of the casement installation itself but also eliminates the use of other framing and trim. Surrounds are shipped mitered and cut to exact length ready for attachment. No fitting necessary—no miters to cut—exact fit guaranteed.

The groove in the surround that seats the casement section insures an absolutely weathertight job.

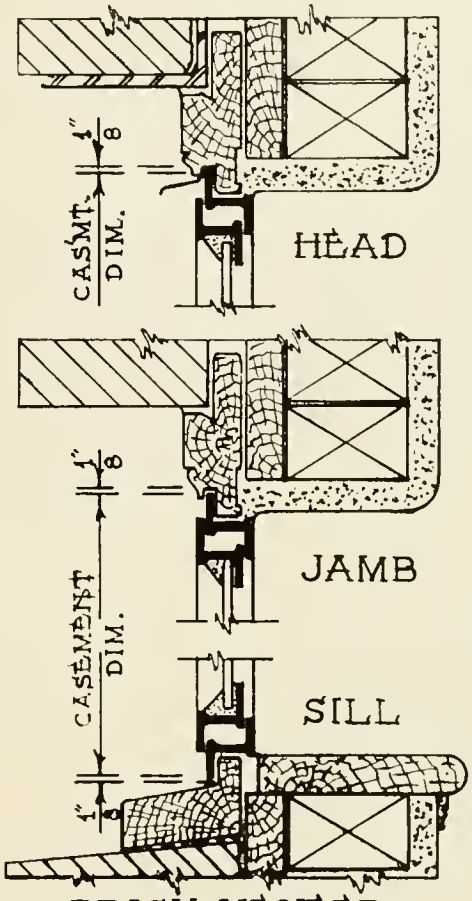
Mastic is supplied for bedding and pointing the sash section.

Redwood mullions for multiple openings are also available and which are mitered to fit standard single head surround sections.

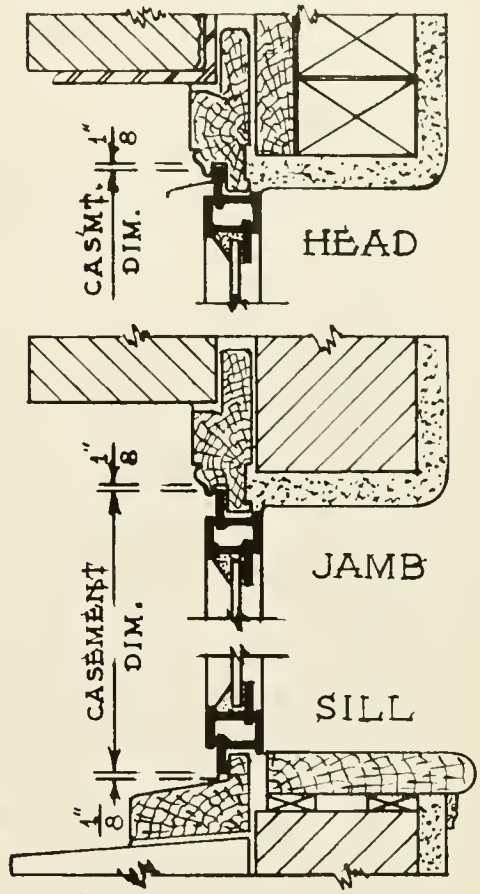




GENERAL VERT. SECTION



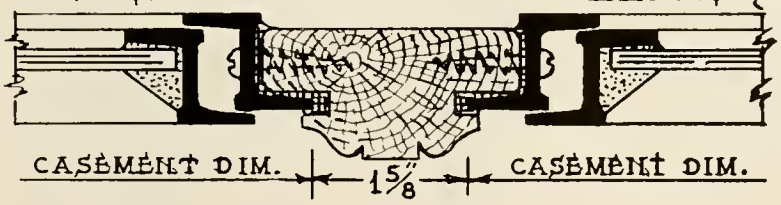
BRICK VENEER

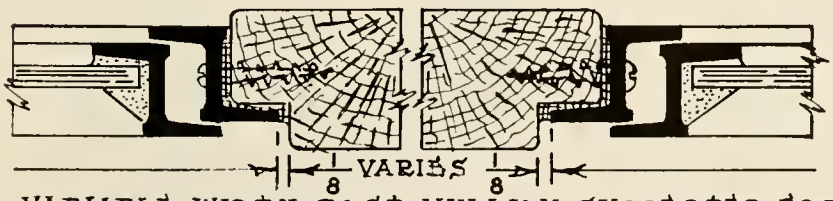


SOLID MASONRY

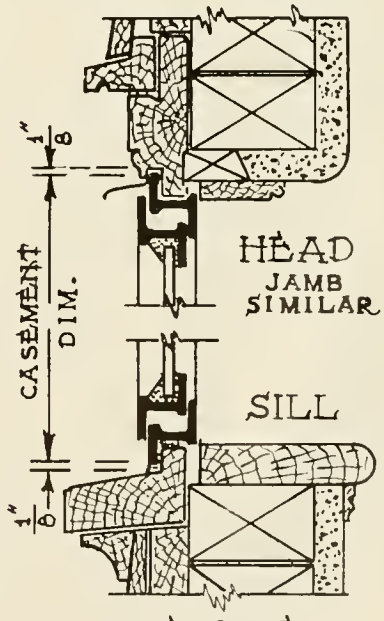
DETAILS AT LEFT ½ FULL SIZE
DETAILS ABOVE AND AT RIGHT ¼ FULL SIZE

STANDARD REDWOOD MULLION - {SHIPPED FROM STOCK



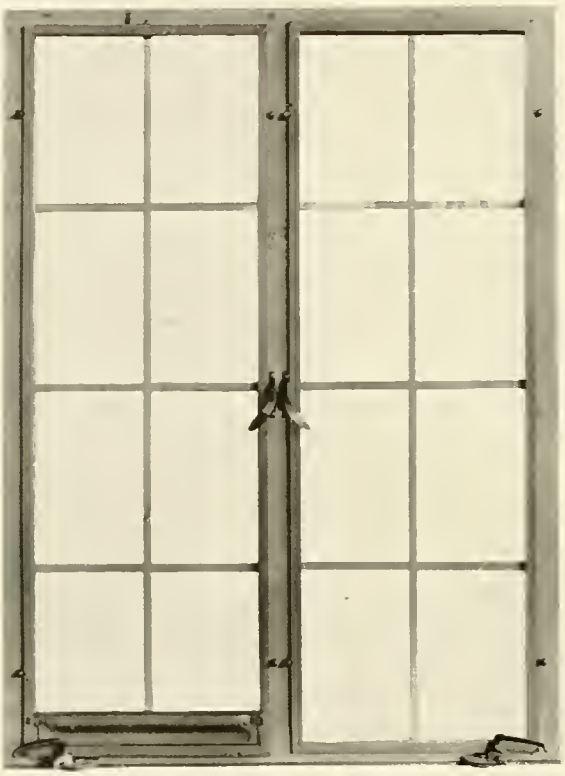


VARIABLE WIDTH POST MULLION SUGGESTED FOR FITTING CASEMENTS TO EXISTING OPENINGS USUALLY SUPPLIED BY LOCAL MILL



FRAME

For casement installations under conditions of severe winter climate or for air conditioned homes or other structures, the use of Insulpanes is recommended.



Insulpanes are a scientific refinement of the storm sash principle, providing in effect efficient double glazing, and adding materially to comfort as well as preventing objectionable moisture condensation.

Laboratory tests on temperature transmission show remarkable fuel saving where Insulpanes are used.

The Insulpane frame is approximately the same size as Vento casement screens and Insulpanes for winter use are instantly interchangeable with summer screens.

A separate folder is available on Insulpanes giving full constructional details and test data.

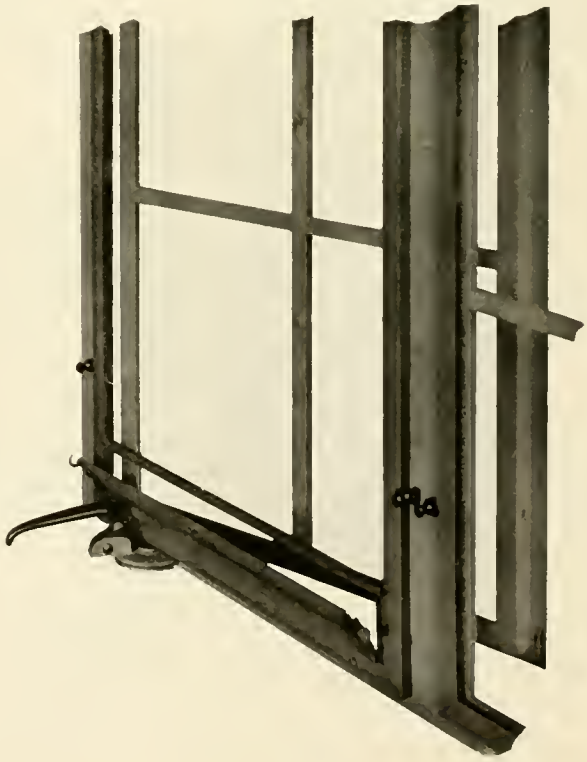
Casement installations intending to use Insulpanes should specify same and windows will be prepared at the factory for Insulpane installation. Existing installations require drilling of additional holes for which details will be supplied on request.

Insulpanes are shipped completely glazed and with all attachments ready for immediate use. The glass is embedded in a cushion of cork for airtightness and firmly held in place by a continuous spring bronze spline, permitting reglazing when required.

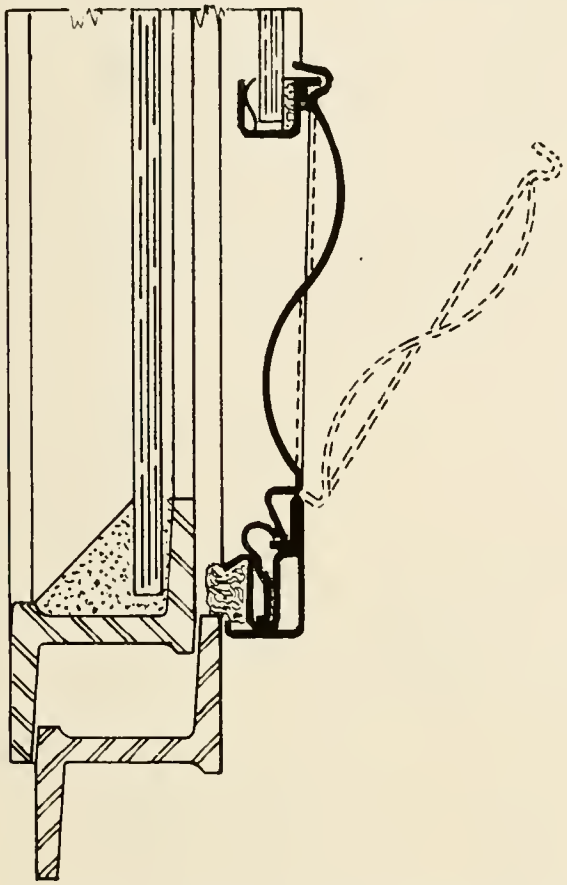
In the back of the frame is embedded a deep, heavy cushion of a special resilient felt which, when tightened against the window frame by the knurled bronze screws, completely and efficiently seals the entire opening.

The illustrations herewith show Insulpanes with and without the small tilt-in ventilator at the bottom. Some rooms, bedrooms particularly, require winter ventilation. Windows equipped with sill adjusters (See De Luxe Type Casements Page 8) open and close as readily with Insulpanes attached as with screens; and when required, Insulpanes are provided with these small inward opening ventilators, which with the window itself open slightly, permits any degree of ventilation required.

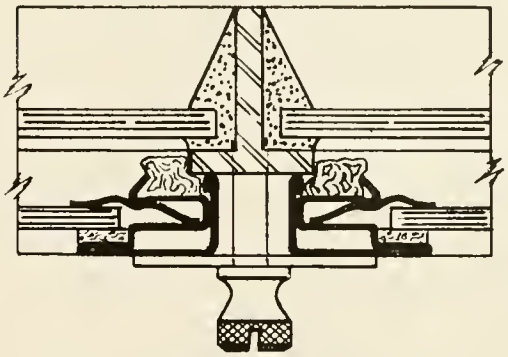
Various construction details are shown on the opposite page while the assembly of Insulpane units to fit standard casements is shown on pages 24 and 25.



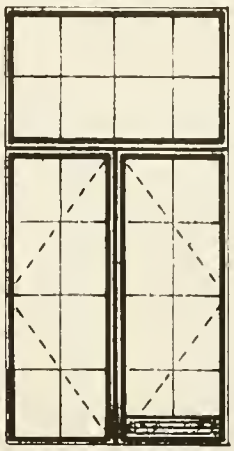
INSULPANE CONSTRUCTION DETAILS



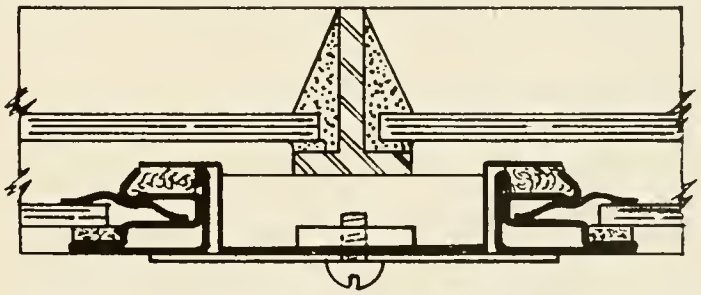
DETAIL AT SILL OF INSULPANE UNIT WITH VENTILATOR



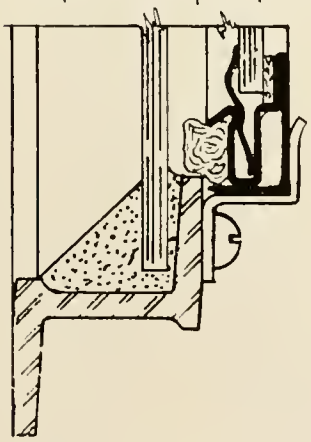
DETAIL THRU CENTER OF ADJOINING INSULPANE UNITS



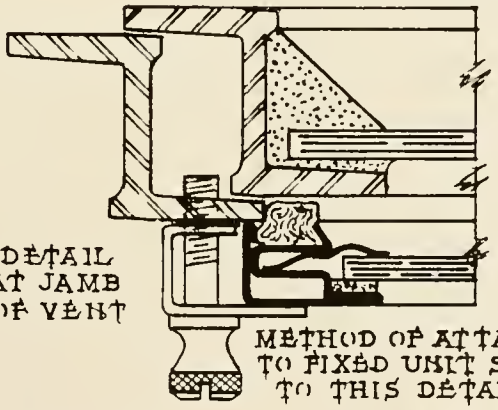
INTERIOR ELEVATION OF TYPICAL INSULPANE INSTALLATION RIGHT-INSULPANE WITH SILL VENTILATOR



DETAIL THRU ASTRICAL WHERE INSULPANE UNITS OVER VENT IS EXTENDED UP OVER FIXED LIGHTS ABOVE VENT.

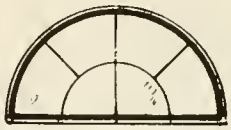


DETAIL AT SILL OF FIXED UNIT

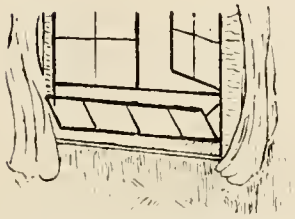


DETAIL AT JAMB OF VENT

METHOD OF ATTACHING TO FIXED UNIT SIMILAR TO THIS DETAIL

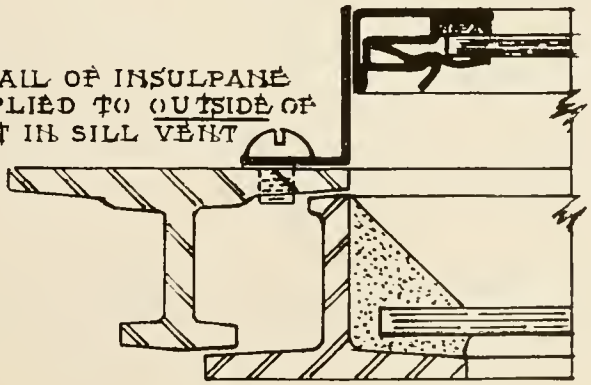


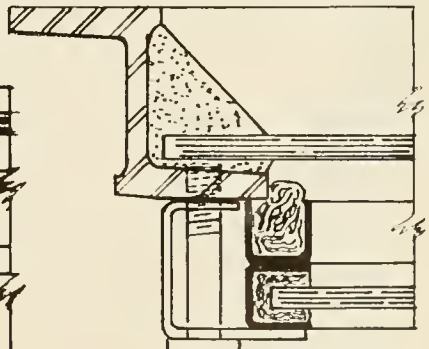
INTERIOR ELEVATION OF TYPICAL CH INSULPANE UNITS



INTERIOR ELEVATION OF TILT IN SILL VENT

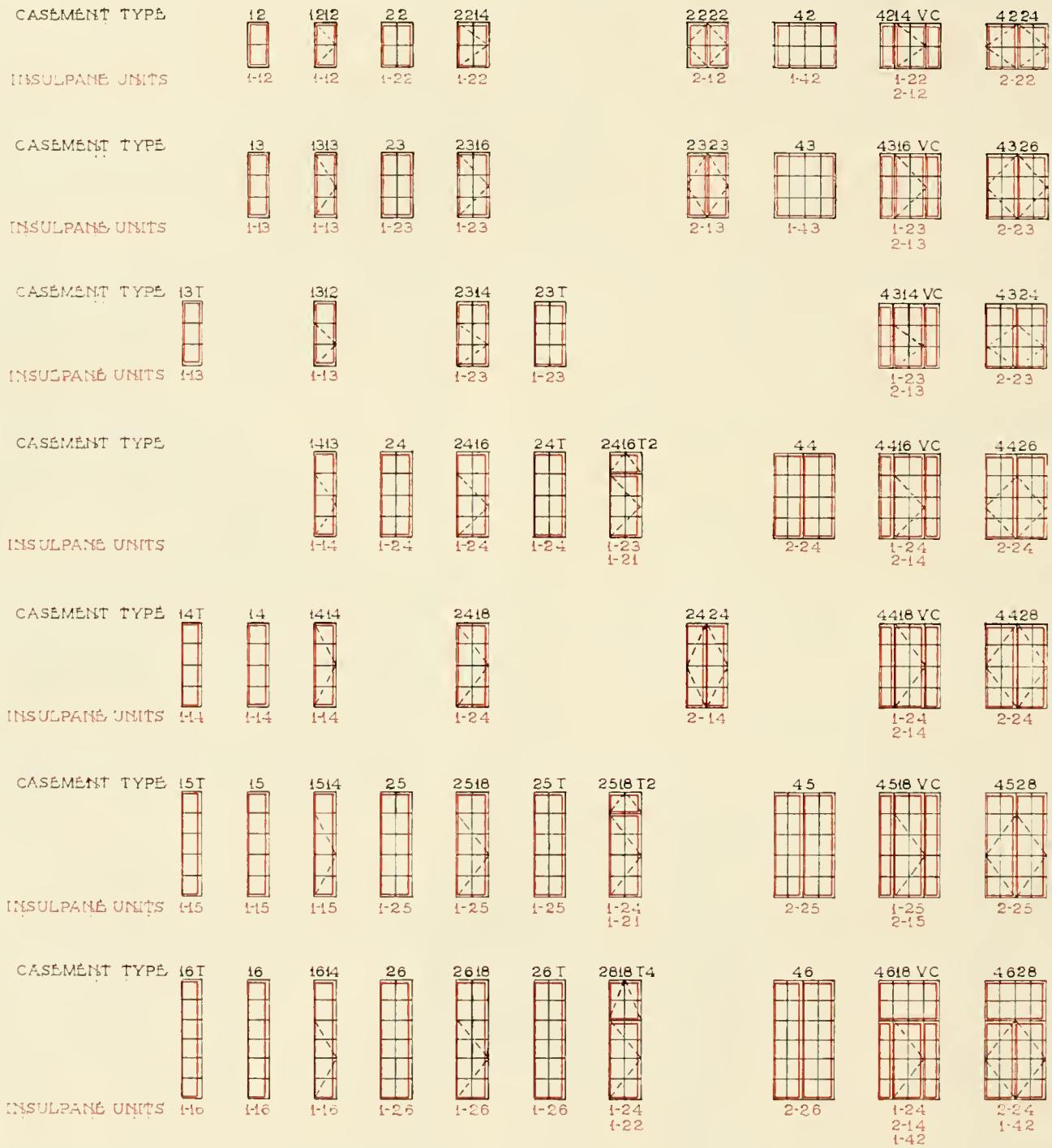
DETAIL OF INSULPANE APPLIED TO OUTSIDE OF TILT IN SILL VENT





DETAIL OF INSULPANE ATTACHED TO CH SASH

VENTO INSULPANE



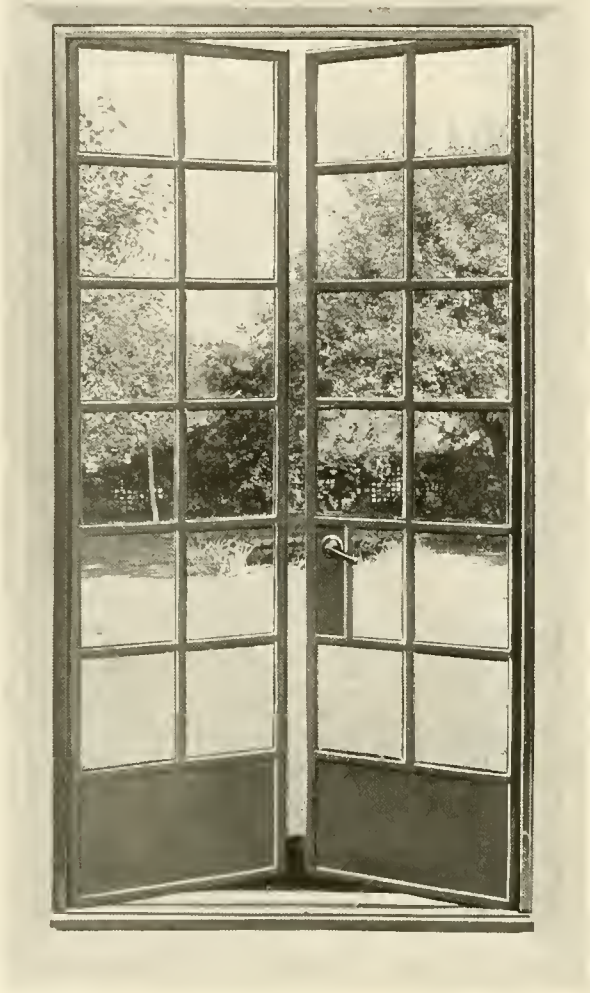
VENTO INSULPANE

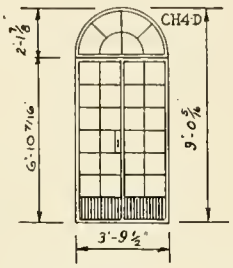
CASEMENT TYPE			62	6224	6224 VC	82	8224 VC
INSULPANE UNITS			2-32	3-22	2-32	2-42	4-22
CASEMENT TYPE			63	6326	6326 VC	83	8326 VC
INSULPANE UNITS			2-33	3-23	2-33	2-43	4-23
CASEMENT TYPE				6324	6324 VC		8324 VC
INSULPANE UNITS				3-23	2-33		4-23
CASEMENT TYPE	4416 VC T2	4426 T4	64	6426	6426 VC	84	8426 VC
INSULPANE UNITS	1-23 2-13 1-41	2-23 1-41	2-34	3-24	2-34	2-34 1-24	4-24
CASEMENT TYPE				6428	6428 VC		8428 VC
INSULPANE UNITS				3-24	2-34		4-24
CASEMENT TYPE	4518 VC T2	4528 T4	65	6528	6528 VC	85	8528 VC
INSULPANE UNITS	1-24 2-14 1-41	2-24 1-41	2-35	3-25	2-35	2-35 1-25	4-25
CASEMENT TYPE	4618 VC T4	4628 T8	66	6628	6628 VC	86	8628 VC
INSULPANE UNITS	1-24 2-14 1-42	2-24 1-42	2-36	3-26	2-34 1-62	2-36 1-26	4-24 2-42

CIRCLE HEAD AND SILL TYPES

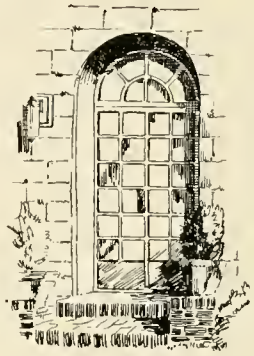
CASEMENT TYPE	CH 1	CH 2	CH 4	CH 6	
INSULPANE UNITS	CH 1	CH 2	CH 4	CH 6	
CASEMENT TYPE		21 S2	41 S4	41 S2	61 S4	81 S4
INSULPANE UNITS		21 S2	41 S4	41 S2	61 S4	81 S4

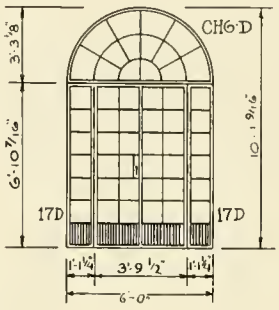
STANDARD CASEMENT DOOR

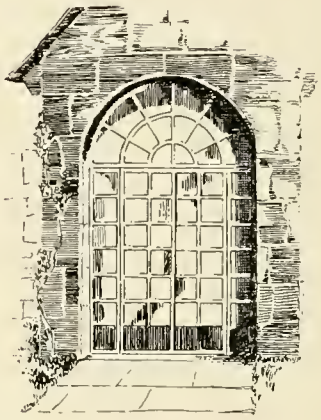


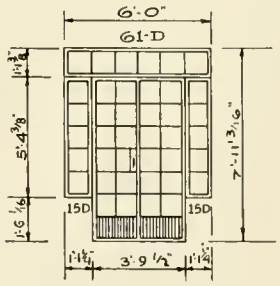


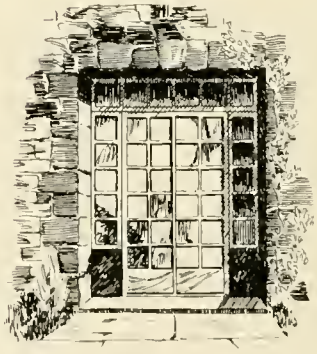
All dimensions shown are opening sizes. See details on opposite page.

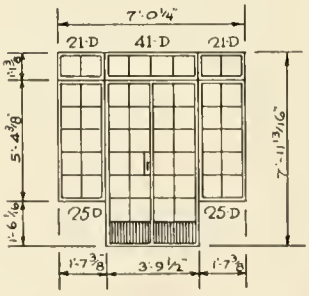


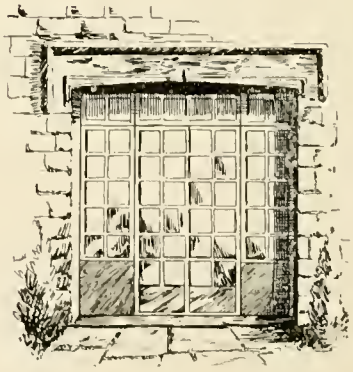








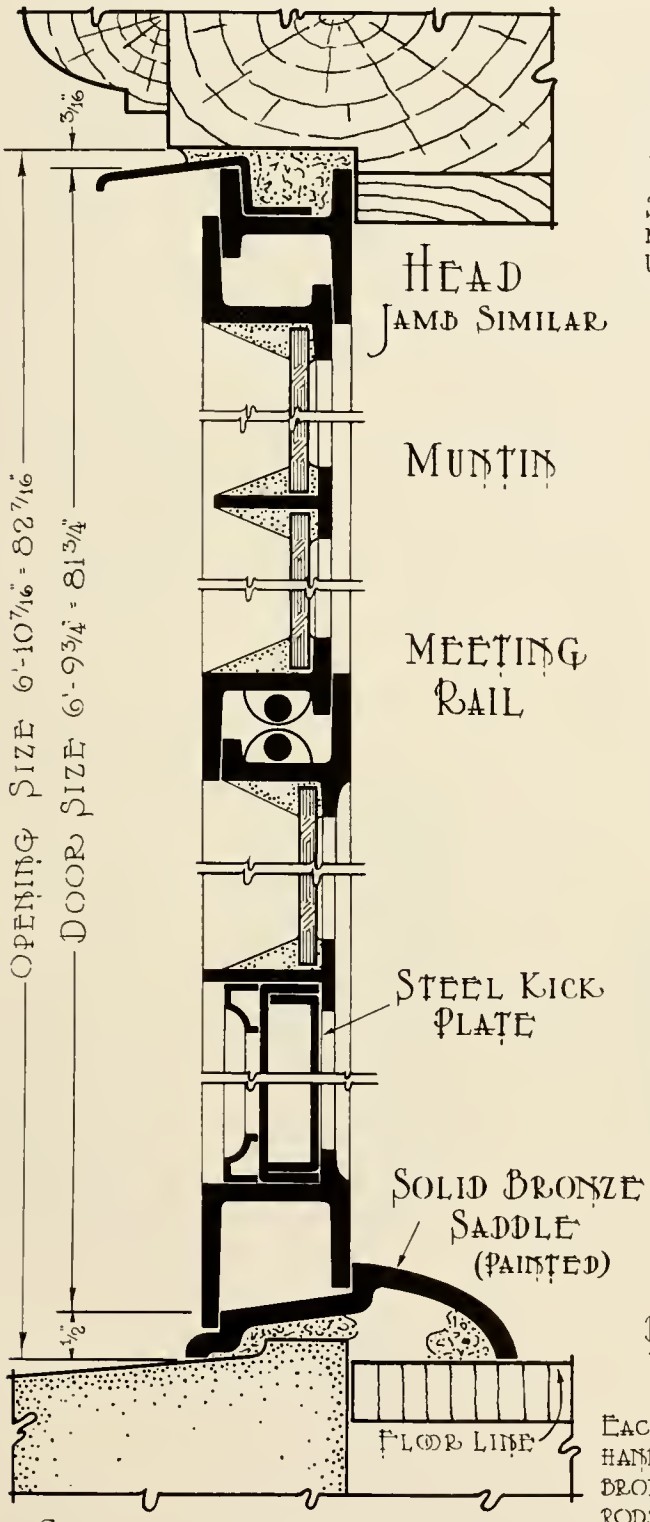




Standard doors are fitted with steel "T" muntins and solid bronze thresholds. Each leaf of door hung on three butts. Right leaf fitted with aluminum lock box and bronze lever handles operating concealed rods that lock doors at head and sill. Doors also lock at center. Left hand leaf fitted with concealed top and bottom bolts. Friction adjusters applied to head of each leaf. A bronze thumbturn on the inside is furnished for locking purposes. Cylinder locks on the outside or both outside and inside are furnished at an extra.

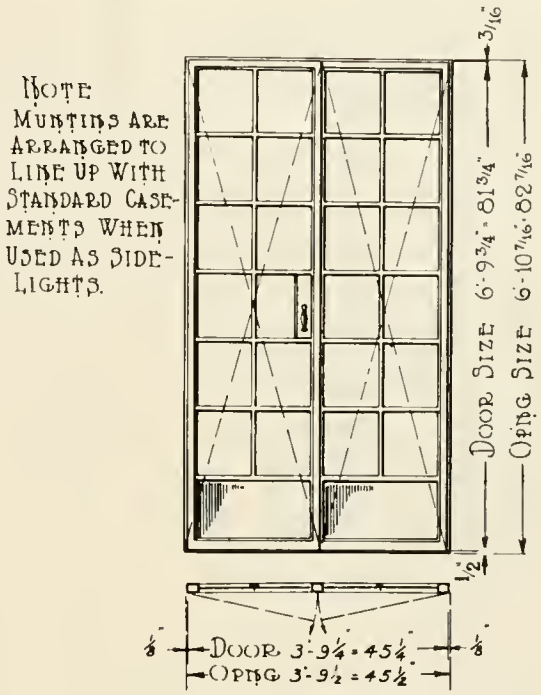
Door, Side Panels and Transoms are all of intermediate casement sections. "T" bar mullions are used to assemble Door with Transoms and side panels.

Full size details on request.

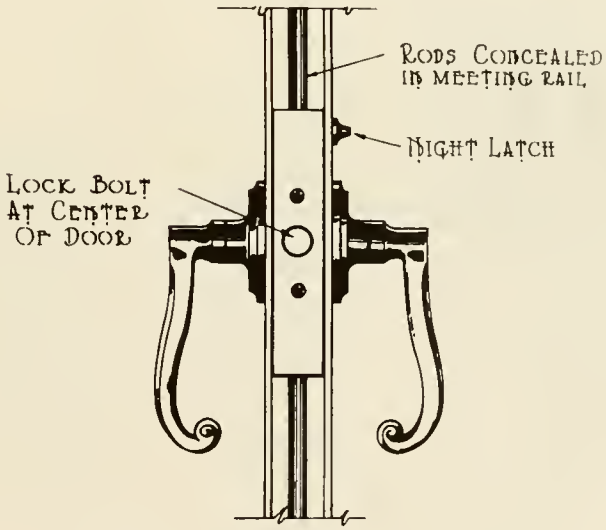


SECTION THRU DOOR

Scale ½ Full Size



ELEVATION Scale 3/8" = 1'-0"



DETAIL OF ACTIVE LEAF OF MEETING RAIL SHOWING CONCEALED LOCK RODS

HARDWARE

EACH LEAF HUNG ON THREE 3" BRONZE BUTTS. RIGHT HAND LEAF FITTED WITH ALUMINUM LOCK BOX AND BRONZE LEVER HANDLES OPERATING CONCEALED RODS THAT LOCK DOORS AT HEAD AND SILL. DOORS ALSO LOCK AT CENTER. LEFT HAND LEAF FITTED WITH CONCEALED TOP AND BOTTOM BOLTS. FRICTION ADJUSTERS APPLIED TO HEAD OF EACH LEAF.

Typical elevation of two panel type doors—Single panel doors optional

Heavy steel frame construction of copper bearing steel, electro galvanized and shipped with a priming coat of gray paint.

This door is furnished complete with mortise lever latch, steel hinges, top and bottom bolts and air closer.

Doors of two panel design have a 3″ top rail, 2″ stiles and cross rail and 5¾″ bottom rail.

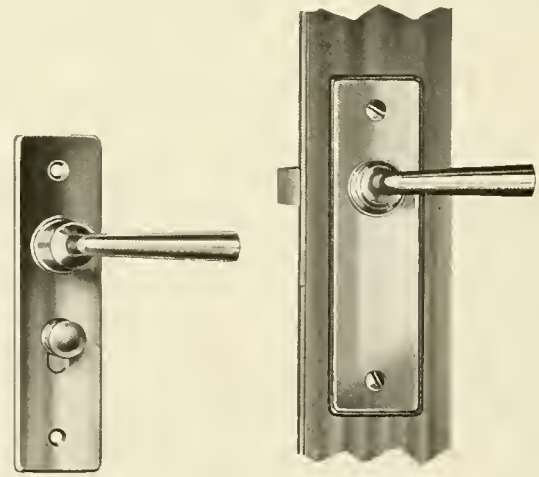
Doors of one panel design have a 3″ top rail, 2″ stiles and 12″ bottom rail.

These attractive doors have been carefully designed to secure the maximum strength and durability and in every detail are a quality companion to the Vento Casement Door.

The screening is readily replaced, a resilient tube holding the wire cloth in the groove of the frame. In case the cloth becomes damaged, the tube is removed, the old cloth taken out, new cloth applied and the tube replaced in the groove.

Top Bolt

Bottom Bolt

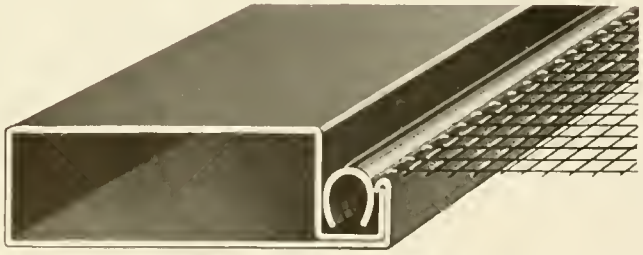


Inside View

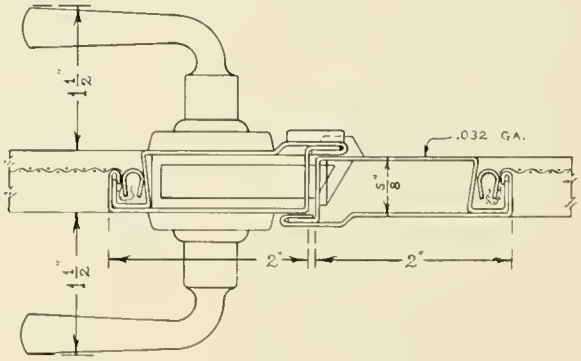
Outside View

Mortise Lever Latch

3x3 Steel Hinge



Full Size Section of Frame



Meeting Stile, Showing Latch and Handles

Vento Casements

1. **GENERAL:** All steel casements shown on drawings shall be of the (Insert whether De Luxe, Simplex or Economy) type, as manufactured by the Vento Steel Sash Company of Muskegon, Michigan, or equal.
2. **MATERIAL:** Frame and ventilator sections shall be Z shaped hot rolled new Billet steel providing two point weathering contact between ventilator and frame. Corners of frame and ventilator sections to be mitred and electrically welded, all welds being ground to a smooth finish. All steel hardware parts shall be heavily cadmium plated before painting.
3. **HARDWARE:** (Insert here specifications shown below for the type of window selected.)
4. **SCREENS:** (Insert here specifications shown below for type of screen required.)
5. **SHADING:** All casements shall be drilled to receive shade brackets. Shade brackets furnished under another heading.
6. **MASTIC:** Provide sufficient mastic cement for embedding casements. Pointing and caulking, if desired, by others.
7. **ANCHORS:** Provide (see note below) for anchoring into the building structure.
8. **GLAZING:** Provide necessary spring wire glazing clips. Glass, putty and glazing under separate heading.
9. **ERECTION:** Casements shall be set in accordance with the manufacturer's instructions.
10. **PAINT:** Casements shall receive one shop coat of grey paint, baked on, at the factory before shipment.

Specification Notes

HARDWARE: Add under paragraph 3 above either of the following according to the type of casement used.

HARDWARE FOR DE LUXE CASEMENTS: All side hung swing leaves shall open on two heavy, double webbed extended cleaning hinges solidly welded to casement frame, the hinge pins riding in bronze bushings.

Provide attractively designed locking handle in natural bronze finish. Operator handle controlling the under-screen adjuster to harmonize in design with the locking handle. Operator to be automatic when released, holding the ventilator in any desired position. Operator to be of (Quadrant or Rotary) type. See page 8.

HARDWARE FOR SIMPLEX OR ECONOMY CASEMENTS: All side hung leaves shall open on two heavy double webbed extended friction cleaning hinges welded to the casement frame. This hinge shall have sufficient friction to hold the ventilator in any desired position. Supply locking handle of type operating through the casement frame, the ventilator leaf to be equipped with pull ring (or—Handles No. 118 or 120 can be supplied See page 9).

NOTE: Add following specifications if sill or transom units are used. Hardware for tilt-in sill units to match hardware of other casements. Transom units shall be equipped with push type locking bar.

NOTE: Standard hardware is made of a tough non-corrosive metal with natural bronze finish. Fully polished solid bronze hardware can be supplied and should be specified when required.

SCREENS: Add under Paragraph 4 above either of the following specifications according to the type required.

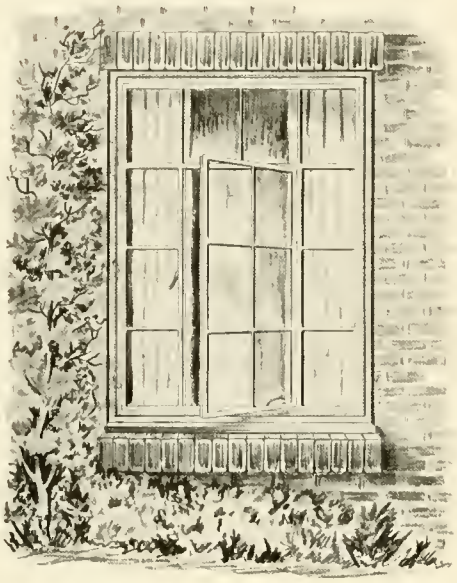
SCREENS FOR DE LUXE CASEMENTS: Provide 5/8" flat tubular frame screens for all ventilator openings. Frame to be made of electro galvanized steel solidly welded and finished with baked on enamel. Screen cloth shall be 16 mesh antique bronze wire.

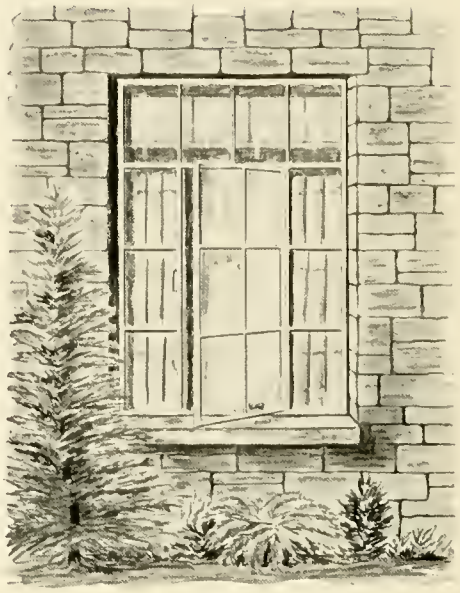
SCREENS FOR SIMPLEX OR ECONOMY CASEMENTS: Supply standard Vento Side Hinged Screens with 5/8" tubular steel frame, frame to be made of electro galvanized steel with baked enamel finish. Screen cloth to be of 16 mesh antique bronze wire. (If locking handles 118 or 120 are used, screens must be of roll or vertical sliding type and such should be specified here.)

NOTE: SCREENS: Screens with 7/8" frame can be supplied on order. Standard frames are steel wired with antique bronze cloth. Aluminum, bronze or stainless steel screen frames can be supplied on order. Screen cloth can be bronze, aluminum or Inconel metal, the latter being generally used with stainless steel screens under atmospheric conditions of considerable corrosion.

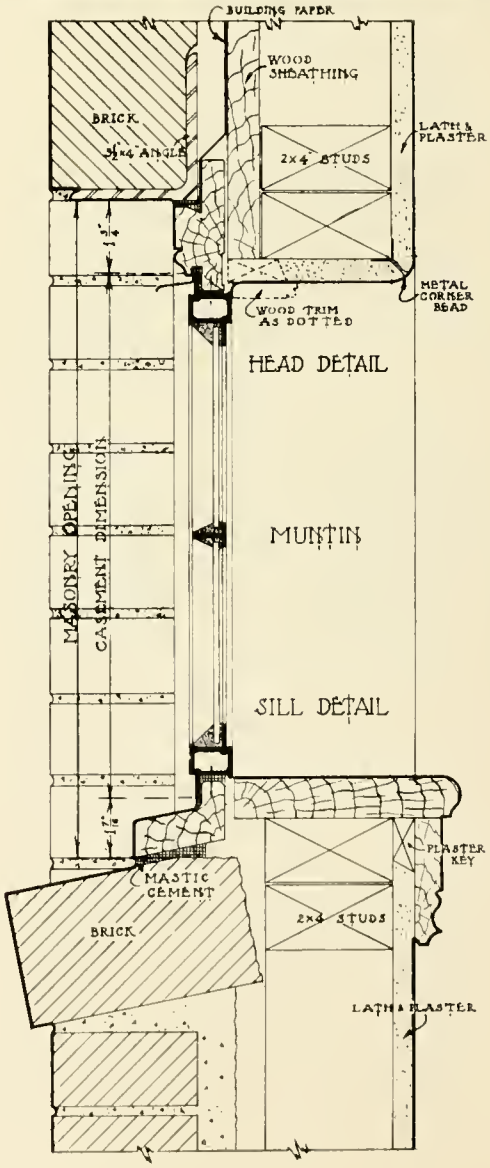
ANCHORS: Specifications under Paragraph 7 above should state which of the several alternative methods of anchorage are required: Viz: Wood screws, continuous fin anchors (for solid masonry) or Redwood Surrounds. Anchorage materials will be supplied in accordance with this specification.

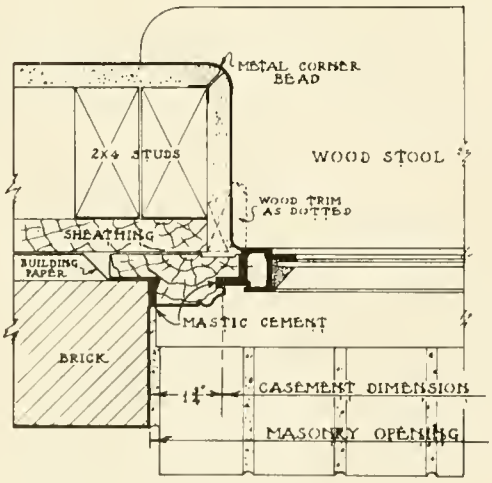
INSTALLATION DETAILS IN BRICK AND STONE VENEER





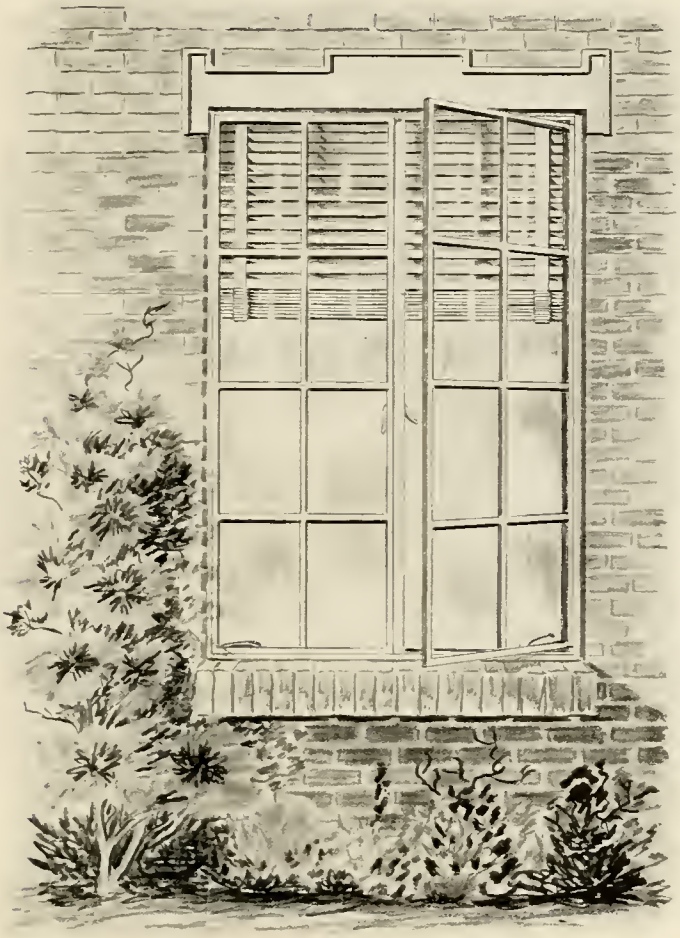
Construction details shown are typical of those commonly used in brick or stone veneer when wood surrounds are part of the installation. For similar construction without surrounds see detail page 34.

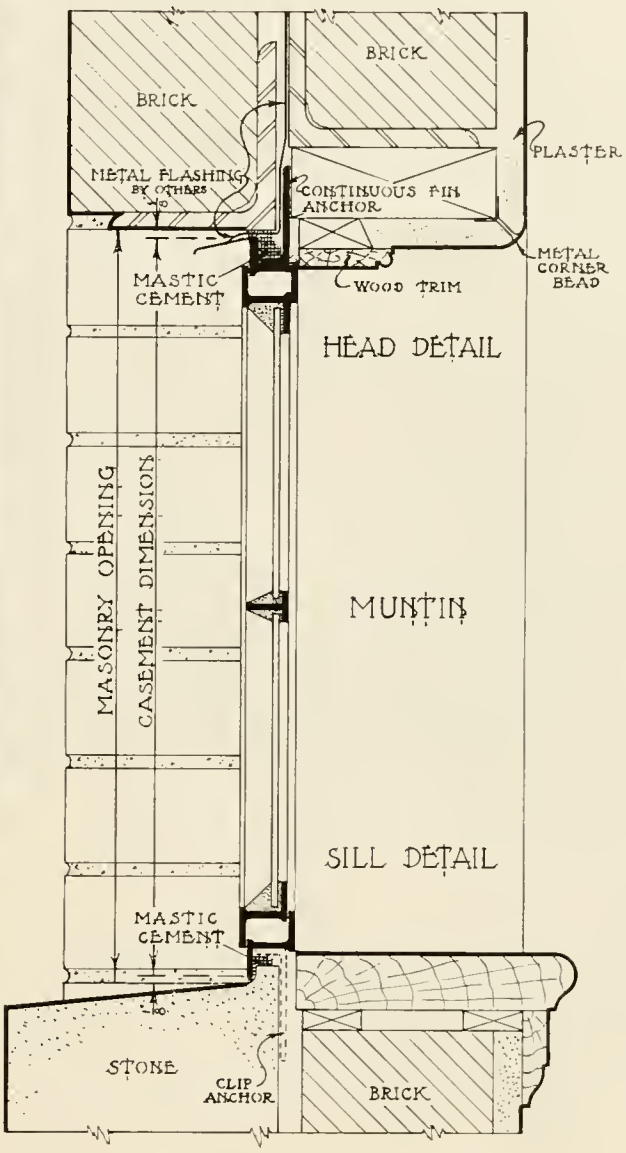


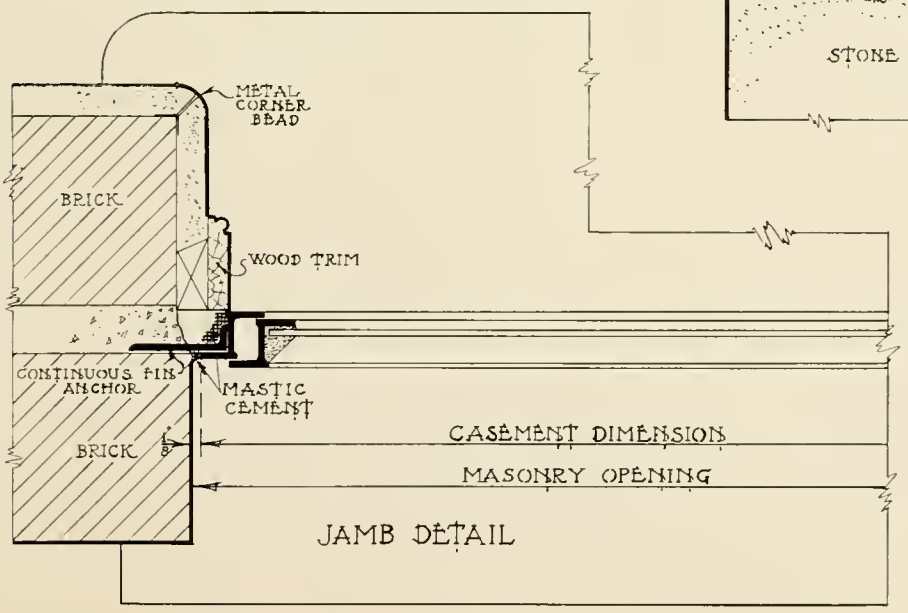


JAMB DETAIL

INSTALLATION DETAIL IN SOLID BRICK

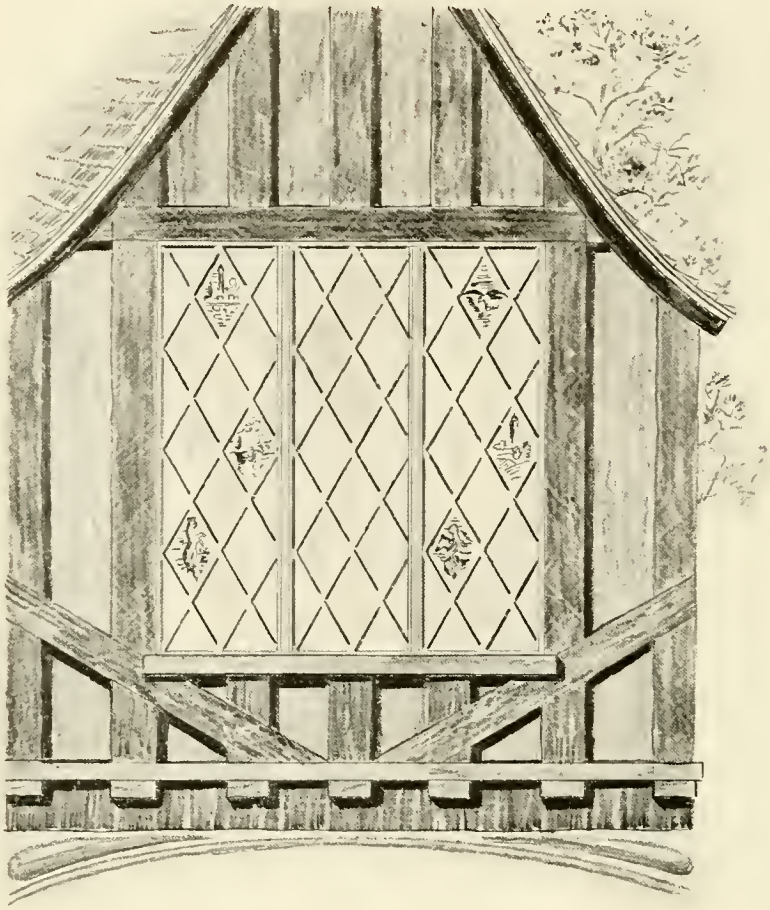


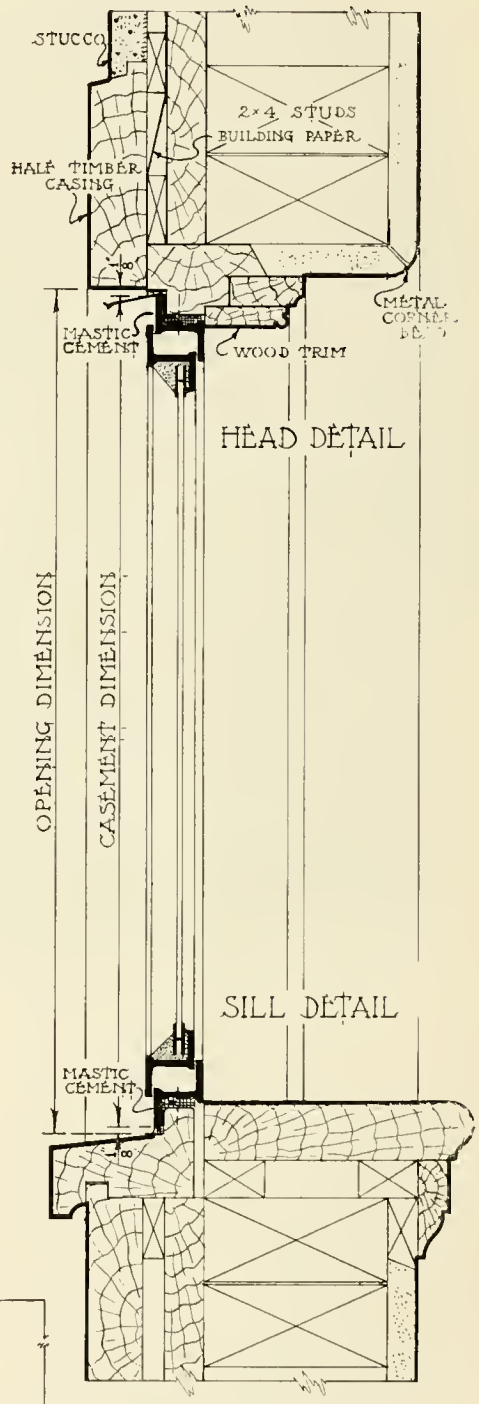




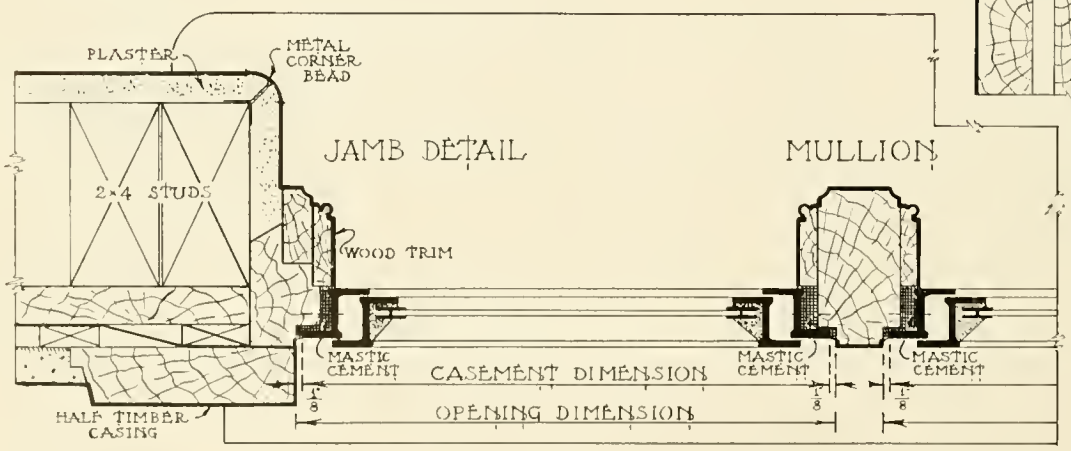
Details noted show the use of continuous masonry fins, which are recommended for this character of construction.

INSTALLATION DETAIL IN HALF-TIMBER

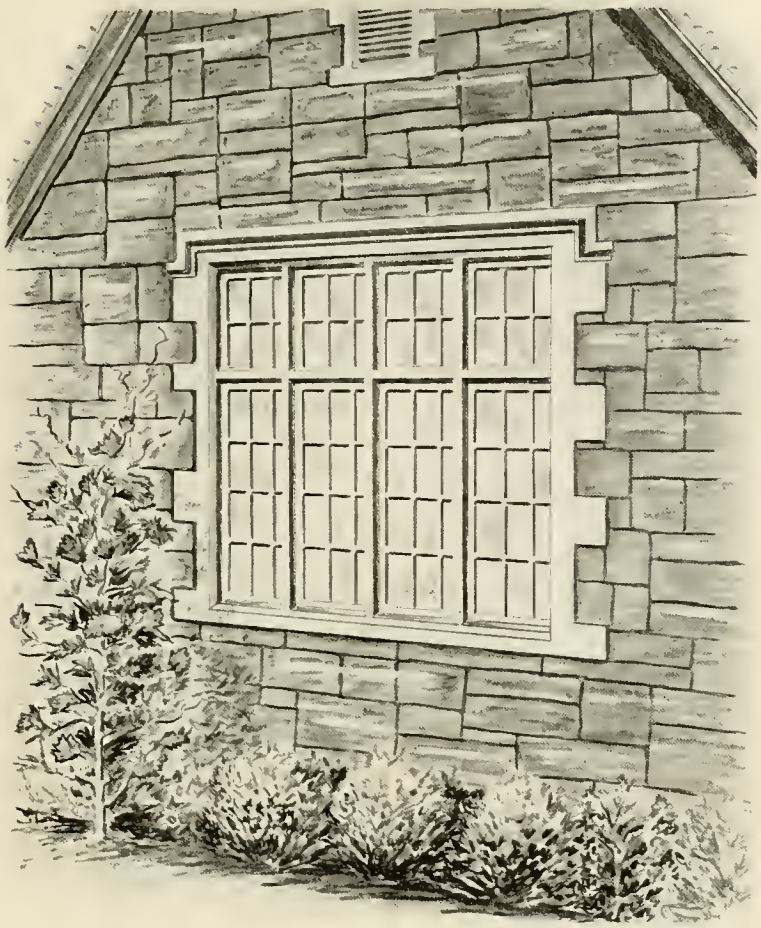




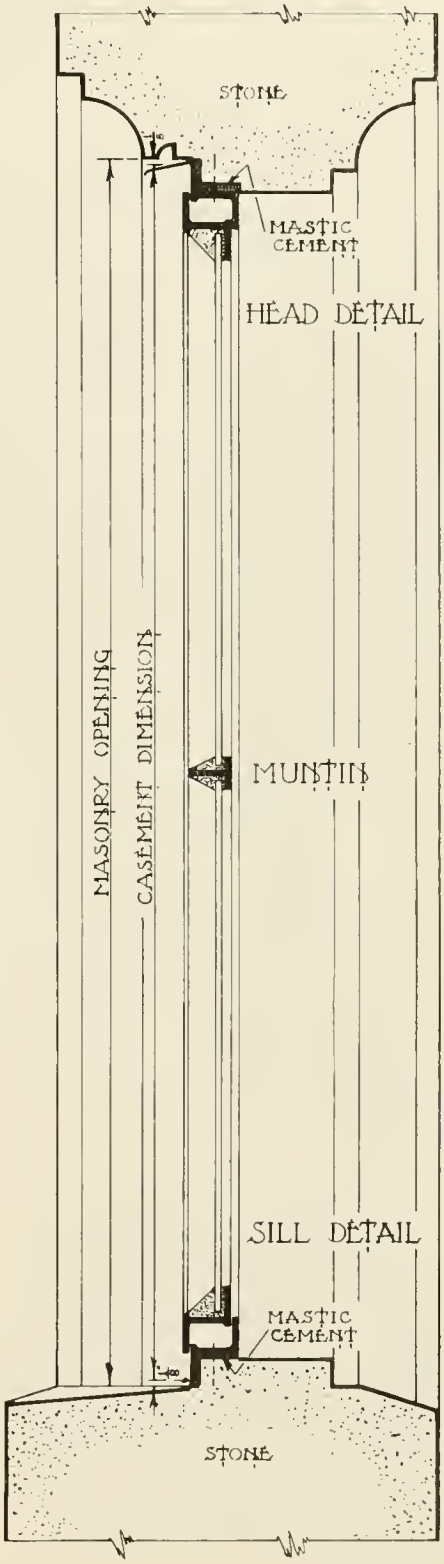
Construction details in Timber or Half Timber are innumerable. Those shown are Typical and Recommended.

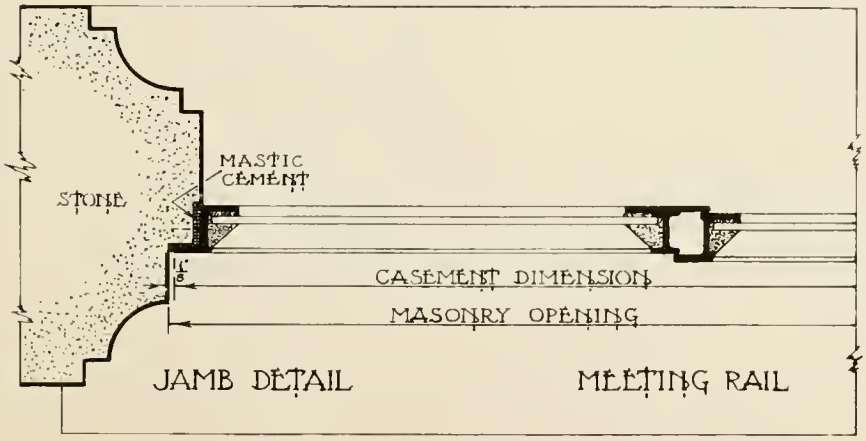


INSTALLATION DETAIL IN SOLID STONE

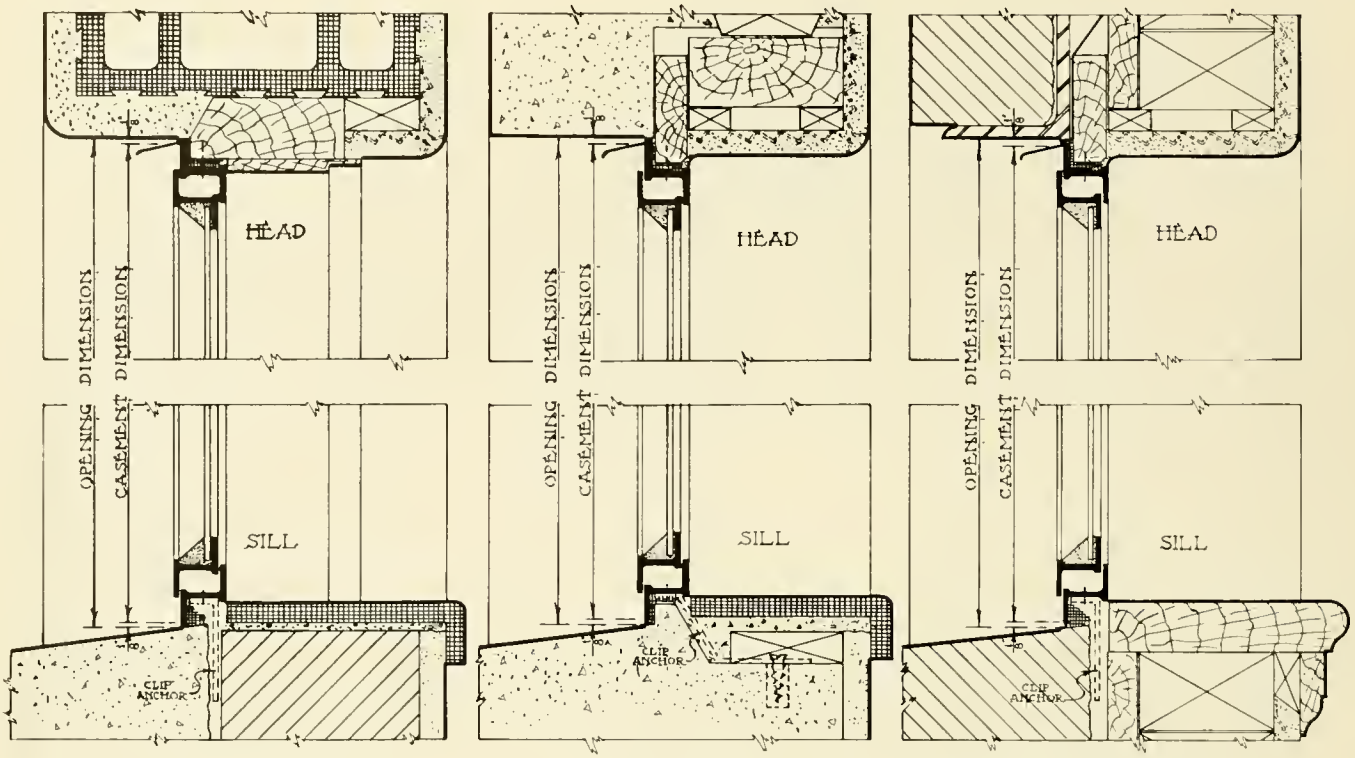


The exact method of anchorage in stone depends to some extent on the details of the stone work itself. Our Engineering Department will be glad to supply specific details in individual instances.





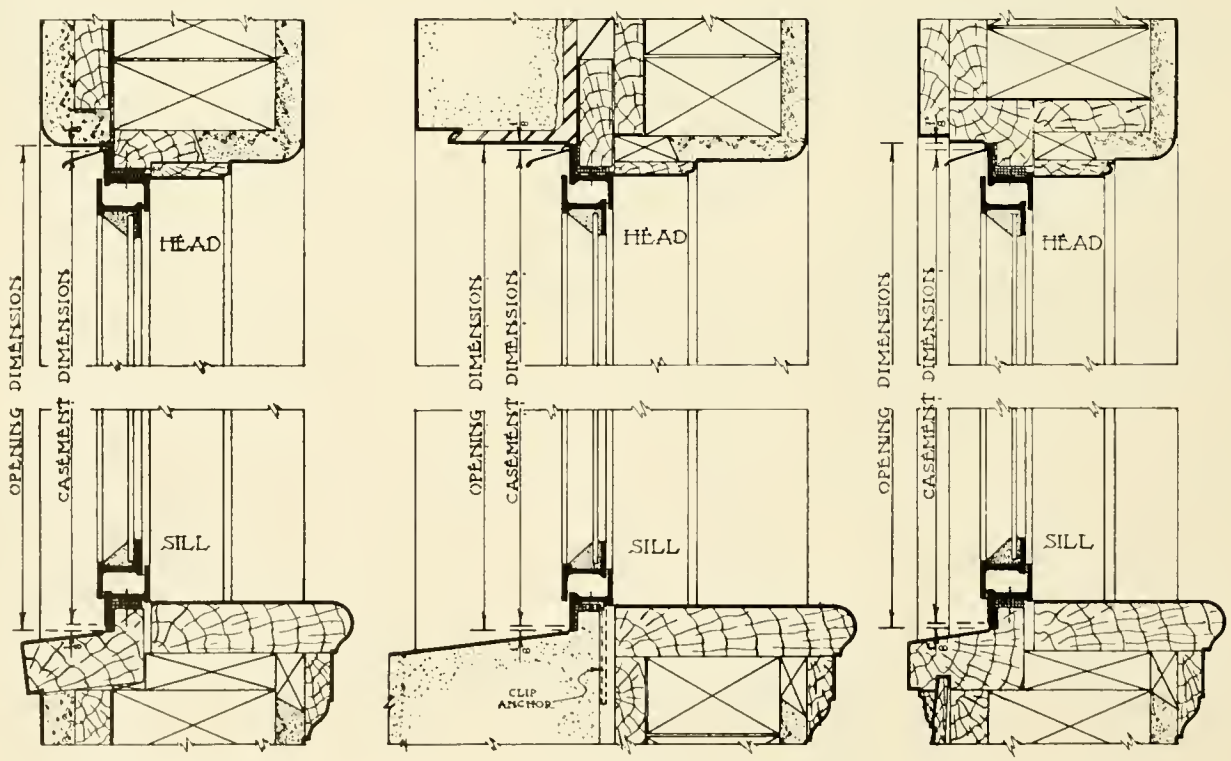
MISCELLANEOUS INSTALLATION DETAIL



TILE AND STUCCO

CAST CONCRETE

BRICK VENEER
WITH WOOD ANCHORING STRIP



FRAME AND STUCCO

STONE TRIM

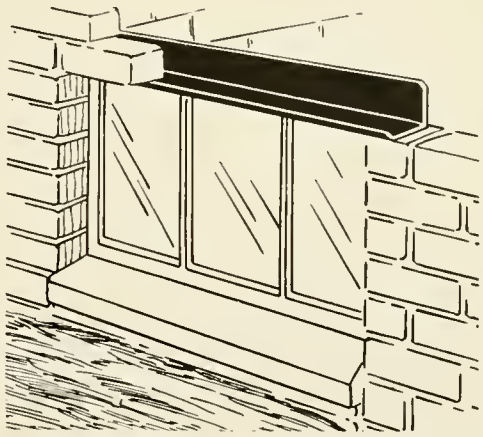
FRAME CONSTRUCTION

Special details for types of construction other than shown herein, or details on oval or bay windows furnished promptly on request

VENTO Utility, and Basement Windows and Coal Chutes are a natural complement to a line of modern window products. They are easy to install in any type of construction, inexpensive and will last a lifetime.

VENTO BASEMENT WINDOWS will not warp, swell or stick. Anyone can glaze these windows in a few minutes as they require neither putty nor glaziers services on original installation or replacement of broken glass. Illustration shows window with Storm Sash applied, these being interchangeable with screens.

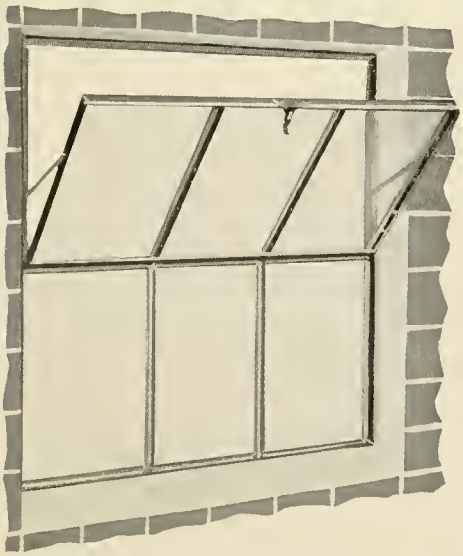
Double channel frame, double contact throughout, heavy structural frame and welded construction insures lasting wear without sag or warp, and makes the VENTO Basement window convenient in operation, practical in its use and thoroughly economical from the point of view of maintenance.



ECONOMICAL VENTO PREMIER STEEL LINTELS insure sag-proof operation of Basement Windows.

VENTO PUTTYLESS UTILITY WINDOWS are made specially for home and commercial garages, stores, filling stations, etc. They are constructed throughout from solid hot rolled new billet steel and are completely electrically welded. Because of this construction they are the strongest and most rigid general purpose window on the market.

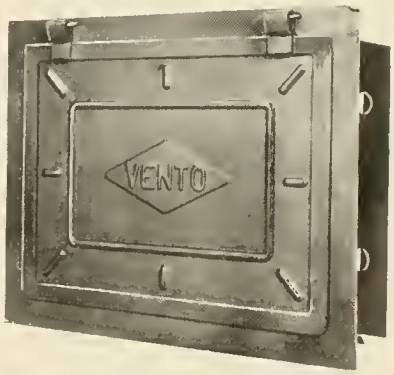
VENTO UTILITY WINDOWS are firesafe, rot-proof, strong and rigid and they are easily erected in frame, brick or concrete. They are equipped with sturdy spring latch automatic lock and therefore can be installed in high locations without the need of any operating devices. The pole catch is a built-in part of the standard lock and insures practical and easy operation to obtain any degree of ventilation desired. The ventilator can be instantly and completely lifted out and held by the sidearms, to give complete opening for full ventilation, or other purposes when desired.



VENTO UTILITY WINDOWS are solid steel construction, puttyless glazed, inexpensive and easy to install.

VENTO COAL CHUTES are made in every size and type, for homes, apartments and public buildings. They are quality companions to the famous VENTO PUTTYLESS BASEMENT WINDOW.

Every VENTO Coal Chute is an outstanding value, because they are made of heavy gauge pressed steel (not cast iron) and all parts are electrically welded. A Fin is provided for air break and anchorage. They are built with steel or wire glass panelled doors, made interchangeable by patented puttyless feature. Equipped with burglar-proof spring lock and chain, which allows them to be operated without entering the coal bin.



The Popular Vento No. 9 All Steel Coal Chute is a sturdy built and economical pressed steel Chute.

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